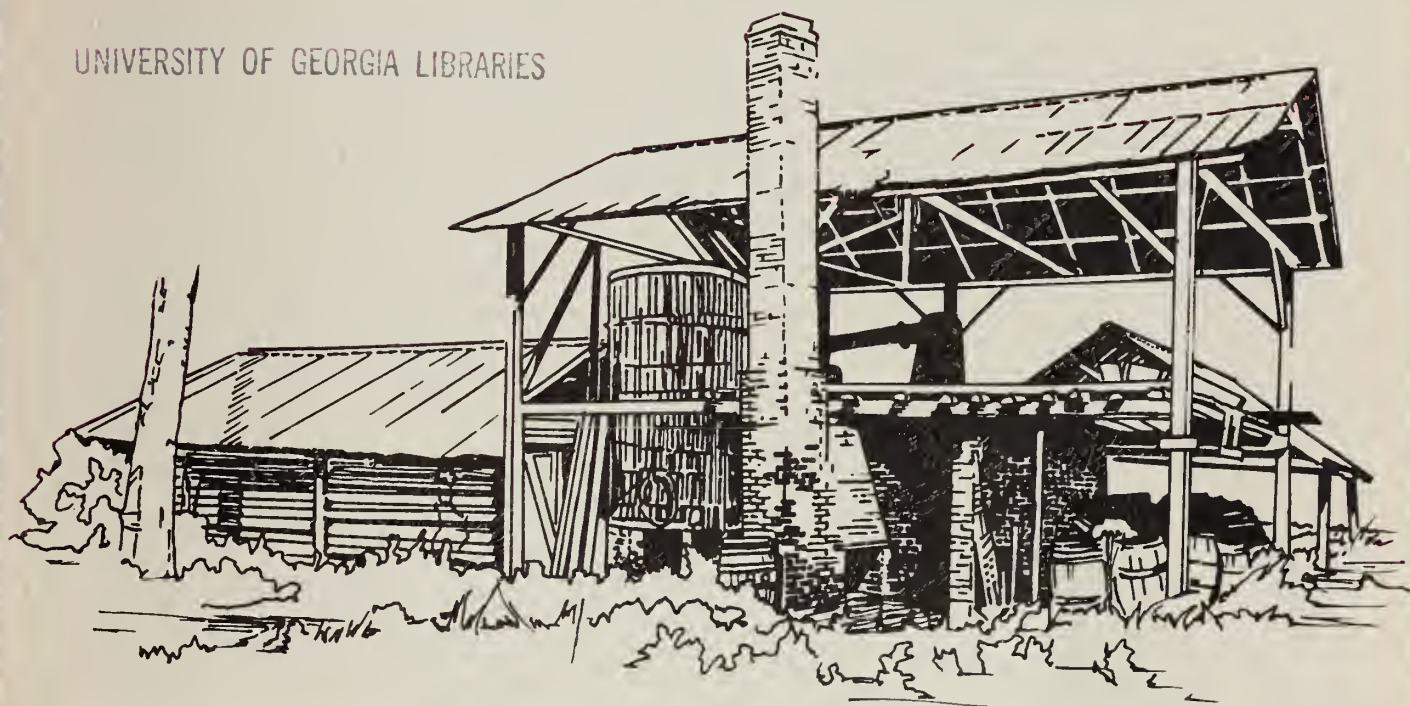


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McCranie's Turpentine Still

by Kenneth H. Thomas Jr.

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McCRANIE'S TURPENTINE STILL
Atkinson County, Georgia

A Historical Analysis of the Site,
with some information
on the naval stores industry in Georgia and elsewhere

by

Kenneth H. Thomas, Jr.

Report submitted April 30, 1975
State of Georgia
Department of Natural Resources
Office of Planning and Research
Historic Preservation Section

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FOREWORD

McCranie's Turpentine Still, located in Willacoochee, Georgia, is, in all probability, the best remaining example in Georgia of a still which once utilized the fire-burning distillation process, a method employed throughout the Southeast at one time. Partial remains of similar type stills are in existence, but McCranie's is the only complex and village known to be virtually complete today.

Because of this fact, a research report was requested by the Georgia Heritage Trust, which originally desired that a turpentine still be acquired to interpret Georgia's premier position within the turpentine industry. During the progress of this research project, however, it was discovered that the Agrirama, a reconstructed village in Tifton which will represent farming, circa 1880, would include a still of this nature, the project being sponsored by the Board of Regents of the University System of Georgia. The determination was then made by the Georgia Heritage Trust that it would not be feasible for two state agencies to compete in presenting this subject to the public, and it was suggested that McCranie's still be moved to the Agrirama site. Due to various considerations, however, the McCranie family made the decision to keep and preserve its still on the original location rather than allow it to be moved to the Agrirama, and the Agrirama then made the determination to acquire another still and restore it for interpretation within the village.

In completing this research report, many persons have been of assistance, including the McCranie brothers, Baker, George, and Shasta, as well as Shasta's wife, with whom I participated in many enlightening conversations concerning the site; those who showed me other stills, including Conway and Ken Vickers of Douglas, Georgia; Howard Cartwright, who discussed the Brooks

still near McRae; and Alvin Moon, who took us to Travis Cook's still, also near McRae. Also of invaluable assistance were Mrs. R. A. Willis of Greenwood, Florida, who allowed a filming session and two interviews; Dr. Frank P. King, director of development at the Agrirama; Mrs. Gaynell Wright of Athens, who is completing her master's degree in anthropology based upon interviews with turpentine workers in South Georgia; Dr. Albert Ike of the University of Georgia's Institute of Community and Area Development, who is negotiating for a film to be made concerning the turpentine industry; and, of course, much support with all the negotiations from my Heritage Trust co-workers, Brittain Pendergrast, David M. Sherman, Thompson Rawls, and David Ashley.

Photographs, unless otherwise noted, are by staff photographer David J. Kaminsky.

Kenneth H. Thomas, Jr.

Atlanta, Georgia
April 30, 1975

FOREWORD

Historic preservation usually describes efforts to preserve buildings or sites related to residential or social structures or functions. Occasionally someone has been farsighted enough to preserve some structure related to the economic well-being of a given community. Such an effort is contained in this report, a description of one of the remaining wood-fired turpentine stills typical of those used in the late 19th and early 20th centuries in Georgia.

The Institute of Community and Area Development at the University of Georgia takes pride in cooperating in this venture. The turpentine industry was and is an important one in Georgia from both an economic and a cultural point of view. In fact, the Institute is currently sponsoring and producing a film to record and preserve the cultural history of the turpentine industry. We feel that both of these activities constitute a significant and very appropriate contribution from the University of Georgia to the Bicentennial Year. We are pleased to publish this description of the McCranie Still written by Mr. Kenneth Thomas, historian with the Georgia Department of Natural Resources.

Ernest E. Melvin, Director
Institute of Community
and Area Development

March, 1976

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CHAPTER ONE

A HISTORY OF THE NAVAL STORES INDUSTRY AND GEORGIA'S POSITION

The naval stores industry is one with deep roots into the history of mankind, dating back as early as biblical days in written history, and with much archeological evidence of its existence before that. The products of resin were extracted by many ancient peoples and naturally spread to Europe, where naval stores remains an industry today. When Europeans "found" the New World, they brought with them their needs for naval stores and thus sought new sources for these needs.

When the permanent settlement of the English colonies began, the naval stores industry appeared not only in Virginia, but in New England as well. But it was in North Carolina that the industry played one of the most important roles in the economy. There, people used pitch and tar (i.e. naval stores) even to pay their debts, indicating that these products were considered legal tender.¹ In America, spirits of turpentine were not distilled from the resin in any great quantity at any site, however, until after 1800, although rosin, in small quantities, was distilled as early as 1737.² Prior to 1800, the major naval stores products were raw gum, pitch, and tar. In North Carolina, the centers of production were along the streams and rivers so that the products could be shipped more easily to distillation centers at Wilmington, North Carolina, Philadelphia, and New York City.³

In colonial Georgia the production of turpentine and other naval stores products was secondary to other industries, especially lumber. The collection of resin did not aid in the clearing of land for settlement; it actually hindered this process. Parliament had passed a Naval Stores Bounty

Act in 1705 which created the payment of a substantial bounty for naval stores production per barrel to try to encourage the industry. When the act was renewed in 1729, the bounty was reduced to a much lower incentive because of oversupply in the colonies. The labor force needed to work the forests to gather the rosin was usually employed elsewhere for most of its time, mainly on the farms and plantations which used the lumber industry during the winter to keep the workers busy, make extra money, and clear the land.⁴

Since turpentine farming was year-round work, it did not lend itself to being a winter or part-time occupation for the idle farm workers. Despite Georgia's vast pine resources, the naval stores industry never really developed in colonial days. Tar and pitch, on the other hand, could be curtailed to wintertime and also could be used for the westward expansion needs of land clearance, since these products could be obtained from tree stumps as well as trees that were not used for lumber.

In 1766, the Georgia Assembly passed an act concerning naval stores in an effort to bring Georgia into compliance with the parliamentary act of 1729. Georgia's act specified the standards and volumes for shipping naval stores as well as the inspections required prior to shipment.⁵

In the twenty years prior to the Revolutionary War, Georgia exported only 877 barrels of turpentine, 2,988 barrels of pitch, and 4,404 barrels of tar, placing the colony fourth behind North Carolina (which produced 60% of the colonial naval stores export), Virginia, and South Carolina.⁶

Between the Revolution and the 1830's, there was little change in the turpentine or naval stores industry. North Carolina continued to be the leading state in production, although statistics for this period are scarce.⁷

It was not until the advent of new uses and new equipment that the industry began to boom and eventually wear out and waste the pine resources of North Carolina and necessitate a move southward.

Several things brought change to the naval stores industry. New uses were found for turpentine and resin. Spirits of turpentine, which had begun being distilled after 1800, had a greater number of uses after 1830.⁸ One major new use was as a fuel for lamps to replace whale oil. There were improvements in distillation, particularly the innovation of the copper still in 1834. A third reason for the upswing in the industry was improved transportation capabilities in North Carolina, where most of the industry was centered.⁹

The type of copper still which is represented by McCranie's came into use, as mentioned, in 1834, replacing the cast iron retort previously used for turpentine distilling. The copper stills were obtained from the Scotch liquor industry and increased the quality of the turpentine.¹⁰

The increase in the number of stills in North Carolina was rapid in the decades of the 1830's and 40's. The economy of the entire state was affected by this. The 1840's was a decade of tremendous progress for the state and was noted with great interest in neighboring states. Most of this prosperity was due to naval stores. In 1840, North Carolina accounted for 96% of the total production of naval stores in the United States. Wilmington is a prime example where, in 1841, there were two distilleries, and in 1845, there were eleven distilleries containing 34 stills.¹¹ The improved local still in port cities brought an end to the need to ship crude gum out of the state for distillation. After the market crash in 1846, stills began to be moved inland from the port cities to be closer to the forests where the gum

was harvested.¹² Railroads in the 1850's tied North Carolina naval stores regions together which enabled them to better retain their position in the industry.¹³

Problems began to arise during these boom years due to poor planning. After harvesting, the longleaf pines in North Carolina were replaced by trees not used for turpentine, and that fact, combined with wasteful turpentinizing methods and disease, brought a decline in the industry in North Carolina and ushered in the movement southward toward better resources.¹⁴ Despite these changes, North Carolina remained the leading producer of naval stores in 1860, with Georgia fourth behind South Carolina and Alabama.¹⁵ Naval stores had been the South's third largest export in the 1850's after cotton and tobacco.¹⁶

Originally, most turpentine stills were run by small farmers. Later, the planter class entered the industry in the 1840's and introduced slave labor.¹⁷ The use of slaves in the naval stores industry has been ignored or overlooked by most historians.¹⁸

The Civil War caused the closing of many export centers for naval stores as well as many markets. Due to the war, replacements were found for many items that previously used turpentine and resin.¹⁹

After the Civil War, naval stores producers realized that the South could profit from the naval stores industry as well as from the lumber industry. Despite her problems, North Carolina continued as the largest producer during the 1870's, with South Carolina following for a short time as the most productive state.

After 1875, it was to Georgia that many North Carolina turpentine farmers moved to "set up shop" in Georgia's great pine belt, south of the

fall line. One of these was Wiley Clements who is said to have set up the first still in southwest Georgia in Worth County in 1875.²⁰ Most of these North Carolina farmers brought black workers with them and returned each year to obtain more workers from the Carolinas. The farmers built villages or quarters for them on the sites since they had no other place to live.²¹ Georgia led in production from 1880 to 1905, when Florida took the lead until 1923. Georgia then resumed its premier position, which it retains.²²

The naval stores industry spread westward as far as Texas, but other states were never able to equal the productive potential of Georgia. The movement west began as trees were destroyed and the forest rendered unproductive because of the crude and damaging methods of harvesting raw gum from the pines. The farmers tended to move westward in desperation, much as the cotton planters before them had done prior to discovering crop rotation.

To the scene of a declining turpentine industry came Dr. Charles Holmes Herty (1867-1938) in 1900. Herty, a chemist at the University of Georgia, was on a sabbatical to Europe when he heard a German professor relate how the Americans "butchered" the pine trees by cutting a box into the tree to collect the resin and sometimes ruined the future growth of the tree.²³ Herty was also able to see cups, a new innovation, being used to collect gum in France at this time.²⁴ Herty returned to Georgia late in the summer of 1900 and started his crusade to better the turpentine industry with an initial visit to Valdosta in October of that year.²⁵ On October 31, he sent a questionnaire to many Boards of Trade and Chambers of Commerce throughout the South in an attempt to learn more about the turpentine industry. Judging from the replies he received, this was not an extremely helpful venture.²⁶

Herty's letter to the United States Department of Agriculture's Forest Service Bureau in Washington produced better results. After he invented the clay, or "Herty," turpentine cup to replace the box method of collecting gum, he was hired by the Forest Service, first as a "collaborator," as of July 1, 1901, at \$300 per year, and later as an "expert" as of January 1, 1902, at \$2,000 per year.²⁷ The Forest Service sponsored his experiments at Ocilla, Georgia in 1902, the results of which proved that the "cup and gutter" system of collecting gum (or resin) was far more productive than the old box method.²⁸

Herty applied for a patent for an "apparatus for collecting crude turpentine" in Washington, D. C., on August 16, 1902, and received it the following year.²⁹ His results at Ocilla were published in the Bureau of Forestry Bulletin No. 40 in 1903, entitled "A New Method of Turpentine Orchardring."

Herty then assumed the role of major proponent for his new "cup and gutter" method and went on the lecture circuit to convince farmers to change to this method of gum collecting in which his cup was the main innovation. He often spoke at county courthouses with "evangelistic fervor."³⁰ Herty also initiated the production of the cup which was first manufactured in Daisy, Tennessee, and stayed with that manufacturing company several years.³¹

As the industry took an upswing due to the new system of gum gathering devised by Herty, Georgia regained her leading position in naval stores production in 1923, as shown by a chart appearing in the statistical section of the appendix.³²

Savannah and Brunswick were the leading ports for the shipment of Georgia's naval stores, especially because both were near the production areas and Savannah was a focal point for railroads. In 1934, there were six factors, or turpentine brokers, operating in Savannah.³³

The increased potential of the naval stores industry after Herty's publishing of his results in 1903 was reflected in an increase in research. After 1912, the Bureau of Chemistry became involved with trying to purify the turpentine and resin produced by creating standards for testing the quality of the products as well as the grade. Used in regulating these standards are colored glasses with which to compare the various grades before they can be sold.³⁴ One of the outstanding achievements for research was the creation of the Naval Stores Experimental Station at Olustee, Florida, in 1932. It was the world's first project dedicated solely to naval stores research.³⁵ Although this center was discontinued in 1973 and the research staff retired or relocated, the research and inventions that emanated from there over those forty years had a tremendous effect on the naval stores industry.

During the years since Herty began his experiments and put the industry on a new course, the federal government has taken an ever-increasing role in regulating the industry and providing funds for experimentation and development, as well as a price supports system which began during the depression in the 1930's. The Department of Agriculture's Forest Service Bureau has issued innumerable bulletins giving details of new procedures for industry workers to aid in the betterment of the industry through federal regulation.³⁶

The Federal Naval Stores Act of 1923 was one of the most important laws passed relating to this industry. Among other accomplishments, this act

prohibited interstate commerce in adulterated or mislabeled rosin and turpentine, set standards for the marketable products, and provided for inspectors to check and mark, when requested, resin products ready for sale and shipment.³⁷

In 1934, the Agricultural Adjustment Administration made an agreement with the gum naval stores producers which restricted their production and prevented the industry from oversupplying the market already hit by the depression. The committee that was created provided a production quota for each state and a size (i.e., girth) limitation as to trees which could be worked. Operators were required to have licenses if operating under these provisions.³⁸

The Commodity Credit Corporation (CCC) began making loans to turpentine farmers in 1934, the McCranie family being a participant in the program. The object of the CCC was the support of prices which had dropped drastically. When war began, however, the program was changed to encourage production of materials needed in the war effort.³⁹

The Naval Stores Conservation Program was established under the Soil Conservation and Domestic Allotment Act of 1936. There has been a similar conservation program each year since. In 1936, as part of this program, the United States Forest Service sent men into the field to supervise the removal of turpentine faces from production, as part of the crop reduction program. Research had shown that it was better not to work trees less than 9 inches in diameter at chest level. Farmers were to be eligible for 25 cents a face for "high cups" and 4 cents a face for "low cups, less than 66 inches in height [from the ground] from which cups have been removed by August 1, [1936]."⁴⁰

In 1940, the CCC loan program was not offered to anyone not participating in the conservation program. For 1941, the loan rate was 30 cents

on a bulk gallon of turpentine compared with 23 cents in 1940. For rosin, the loan rate was \$1.95 for 100 pounds of Grade H.⁴¹

In 1936, the American Turpentine Farmers Association Cooperative (ATFA) was organized and held its first meeting on July 8 at its headquarters in Valdosta, Georgia. A major force in keeping the industry solvent in times of need by providing loans and national advertising programs to boost sales, the ATFA has acted as a lobby for the industry as well as obtaining research grants. This group is still active at its headquarters in Valdosta.⁴²

As interest and support grew to help improve the turpentine industry during the 1930's, various new methods were tried to increase production and centralize efforts. One new approach was chemical stimulation of the flow of gum or resin. After many chemicals were tried, sulfuric acid was determined the most successful. The effective use of sulfuric acid came with the invention of a plastic spray gun in 1947 which began to be used by farmers shortly thereafter. The patent was awarded in 1950.⁴³ By 1960, acid was believed to be used by about 90% of the industry farmers. The use of acid reduced unnecessary cuts into trees and a worker needed only to strip off the bark. Better gutters were developed that avoided cutting into the trees to affix them, and more of the tree was saved for lumber purposes as well as increasing gum yield.⁴⁴

At Olustee they first developed a better fire distillation building and setting and better controls on the processes. Then came the invention and perfection of the batch steam distillation process, which was the first radical change in distillation methods in a century. It caused the stills to be less localized and more centralized in locale since it was not practical to build a huge steam distillery on every turpentine farm.

The batch steam distillation continued to have problems with the trash in the gum. The invention of the gum cleaning process, in which the gum was filtered and washed first before being distilled, caused any rosin produced to be of higher quality. A later perfection was the change to the continuous steam distillation system which was not too different from batch distillation except it saved labor, steam, and floor space by running the still on a continuous basis. This new process reduced labor to almost zero.⁴⁵ These improvements and changes, combined with better and more standardized marketing plans, revolutionized the industry.

The most important of these changes was from the local fire distillation, of which McCranie's Turpentine Still is the best known remaining example, to the centralized steam distillation plant. Some advantages of this new system were improvement in the quality of the final products, the control of the processes, and the elimination of much waste associated with distillation. In the fire distillation process, quality depended on the local operator and his ability to run the still and to decide the input of water, etc., into the process. Control was virtually impossible as witnessed by the methods of running the still. Waste was at least 10% due to crude equipment and other factors.⁴⁶

Although this chapter is primarily concerned with the gum distillation portion of the naval stores industry, it should be mentioned that there had developed by the early 1950's four ways of obtaining turpentine from resin. The two major divisions were gum naval stores, consisting of gum distillation by steam, formerly by fire; and wood naval stores, consisting of the steam distillation of wood (i.e., pine stumps left from lumbering), destructive distillation of wood (by heating pine wood) and sulfate pulping (creation of

turpentine by the condensation of vapors, which produce sulfate turpentine and tall oil).⁴⁷ The products of these methods were called respectively gum turpentine, steam-distilled wood turpentine, destructively-distilled wood turpentine and sulfate turpentine. The naval stores industry thus existed in two divisions after the advent of the research and new methods introduced since the 1930's. These various methods of turpentine production have grown in the past thirty years to compete very effectively with gum naval stores production and caused that part of the industry to have some serious setbacks.

The advent of strong competition with the production of turpentine by other means has caused great alarm within the gum naval stores industry, despite the inventions and other changes to the industry in the 20th Century. The industry has declined in the thirty years since World War II mainly because of this rising competition and lack of innovation on its own behalf in the face of this competition.

Two research studies done during these three decades indicate many of the problems, suggest solutions in the form of recommendations and leave many questions unanswered, the major one being: what is the future of the gum naval stores industry?

The first report, published in 1954, was written by T. A. Wastler, Jr. of the Engineering Experiment Station at the Georgia Institute of Technology and was sponsored by the Board of Regents of the University System of Georgia. The report was entitled "Naval Stores Industries -- Research Needs." The major import of this report was for more research to be done in forest work. Emphasis was placed on the juxtaposition of gum naval stores versus wood naval stores.⁴⁸ The gum industry had unlimited raw materials but a great lack of products, while the wood industry had a variety of products (thus a stable

economic position) but a lack of raw materials. Wastler saw a great future for the sulfate naval stores industry which had just begun evolving when he wrote. Some of his research recommendations included developing a fast-growing, high-yielding pine; improving harvesting of gum and more mechanization of harvesting; reforestation; and researching into the composition of resin (gum) itself.

Sad to say, but many of the same problems existed, and many of the same recommendations were made in the second report, published in 1971. This report had been initiated in 1967 by the Altamaha Area Planning and Development Commission as a two-year economic study of the gum naval stores industry, financed by the Economic Development Administration and also researched by the Industrial Development Division of the Engineering Experiment Station at the Georgia Institute of Technology.

In 1971, the final report, entitled "A Study of the Problems and Potentials of the Gum Naval Stores Industry," was issued. The authors of this report emphasized the decline of the industry since 1950, pointed to the problems faced by the industry, and presented recommendations for change. One of the problems noted was the rise of competing industries, especially the tall oil industry, a by-product of pulping, which was expected to exceed distilled-rosin production in 1970.⁴⁹

There was a demand expressed by those interviewed by the authors for more stable prices for rosin since competition between the branches of the naval stores industry caused those other than gum distillers to get the greater part of the market. Tall oil rosin is cheaper and has more stable prices than gum-distilled rosin.

A third problem was concerned with final products. There had been no new developments of by-products in gum distillation, while replacements had arisen from new derivatives in the other branches of the industry to replace the older products. These other branch industries had arisen and could better fill the needs because of these new products developed through research. The gum naval stores branch had sponsored very little research in the last twenty years, and, apparently, none to help it compete with the new branch industries that had arisen in the meantime.

A final problem of the industry as a whole was the government price support system which had been in effect since the 1930's. This did not help the gum naval stores branch in competition with the other branches. Eighty percent of those surveyed by the authors felt it was essential to support the gum rosin farmers.⁵⁰ The distilled-gum products were kept in CCC stockpiles, and this fact enforced insecurity when it came to prices since one was never sure when the CCC would release these stockpiles on the market.

There were also internal problems experienced by the industry that came to the surface during the surveys conducted with respect to the 1971 report. One major consideration was the total lack of innovation in gum gathering. They pointed to the wild forests, which were never planned, where gum gathering was very hard work and the same old methods of chipping and dipping, that had been used as long as anyone could recall, were still being used. These operations had to be carried out on foot since the wild forests prevented any vehicles getting between the trees. Attempts to use mechanized equipment proved futile because of the excess weight of the mechanism and the distance between the trees. Most of the cost attached to the final products was considered to be 60% labor. There was a severe shortage of workers, due

to low pay, low social status, and low self-esteem, as well as the fact that the work is seasonal and usually takes place far from any major city. There had been very little new labor secured for the industry and almost no recruitment program. Welfare programs were also cited as hindering employment and recruitment, since it was felt that the programs paid people not to work and often paid them more than the low wages of the naval stores industry.

The report indicated that chemists were working to replace previously rosin-based products. One informal recommendation was to begin research on ways to continue to use the rosin-based products and thus continue to compete.⁵¹ There were seven formal recommendations to the industry in 1971:⁵²

1. The increase in mechanization in order to lower production costs;
2. The establishment of naval stores plantations with orderly planting of trees and improvement in the harvesting techniques to reduce cost;
3. The improvement in the labor situation, including formal recruitment, hiring, pay, working and living conditions, image, off-season jobs, and better supervision of labor for efficiency;
4. A direct price subsidy;
5. The creation of a centralized organization, other than those organizations already in existence, to coordinate production processes and marketing activities of gum naval stores producers;
6. The creation of other organizations to provide research and education programs;
7. The possibility that the gum industry could be taken over by another industry already equipped to manage these types of

problems, such as the tobacco industry, was also suggested as an alternative if nothing else helped.⁵³

The rest of this report is very good and quite extensive. The section on the manpower situation is especially useful in understanding the problems faced by the industry today. The lists of persons interviewed and knowledgeable in the industry are good sources for further research in the industry. The surveys taken and their responses indicate much of the pulse of the producers today.⁵⁴

Decline in Gum Production 1950-1960

	<u>1950</u>	<u>1960</u>
Number of Crude Gum Producers	8,863	1,222
Volume of Crude Gum Produced	1,330,000 barrels	194,635 barrels
Workers (estimated)	21,000	3,300

This 1971 report brings us very close to the present day, with Georgia still in the premier position in the naval stores industry, an industry faced with many problems -- just as North Carolina's was in the 1870's. Will the industry benefit from these recommendations which have now been formally presented more than once? Will gum naval stores continue to decline and eventually become extinct?

The course of continually decreasing production in the face of a diminishing supply of labor and decreasing acreage under production. . . can lead to but one end, and that is the death of an industry that once stood tall among all others in the Southeast. This does not have to happen; indeed, it is inconceivable that it should.⁵⁵

CHAPTER TWO

THE LAND

McCranie's Turpentine Still is located in Atkinson County, Georgia, on a three-acre tract of land just before you reach the city limits of Willacoochee, on the north side of U. S. 82 which runs from Tifton to Waycross.

The Indians having been removed from the land by treaty, the acts of 1818 and 1819 provided for the distribution of land for white settlement in a land lottery held in 1820. The lot upon which the still is located, Number 477, of the 5th District of Original Irwin County, was a 490-acre lot drawn by David Beasley of Jones County, Georgia, and granted to him in 1833. The land became part of Coffee County, when that county was created in 1854, and then Atkinson County after 1917.

The complete history or title to this land has not been traced, primarily because the still is so recent in vintage that the previous century or ownership was not relevant to the still or the industry represented. Courthouse fires for Coffee County in 1898 and 1938 would have hampered any thorough search for the historical title to this land if one had been needed.

The land passed to the McCranie Family in a deed dated July 6, 1937, from the T. L. Paulk estate and is currently owned jointly in partnership by the three brothers. Prior to 1936, the highway ran behind or north of the present still site, and there was a very old dwelling on the property which has been since torn down.

The three acres that represent the still site proper cannot, of course, represent the acres of pine trees needed to produce the resin that was distilled into rosin and turpentine or the adjacent village or quarters where the

chippers and dippers lived who worked the trees and the site. The extant houses of the village are also owned by the McCranie Brothers as well as house number 9 which has been moved to Shasta McCranie's homeplace nearby.

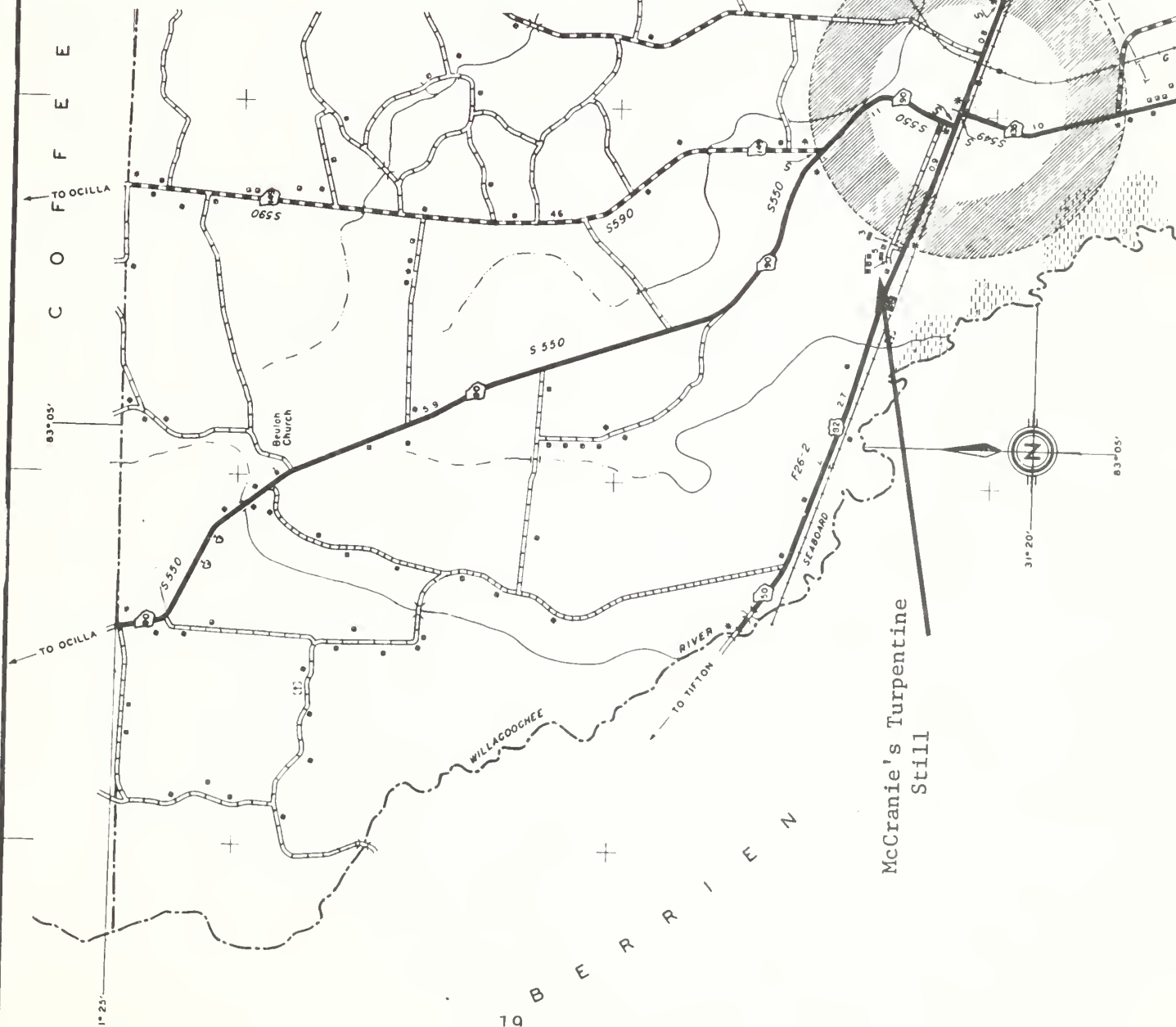
The following highway map indicates the location of the still.

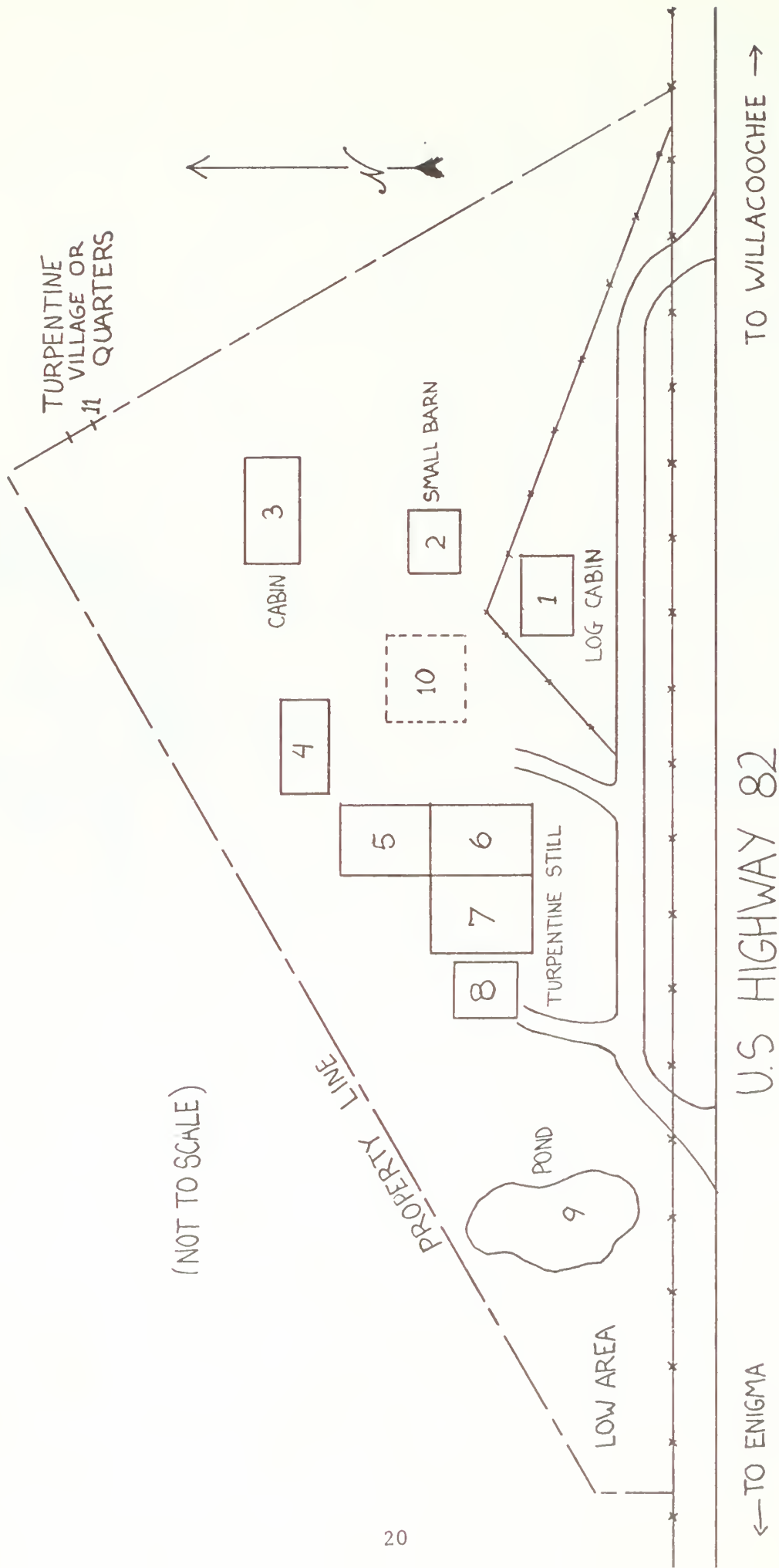
GENERAL HIGHWAY MAP ATKINSON COUNTY GEORGIA

PREPARED BY THE
STATE HIGHWAY DEPARTMENT OF GEORGIA
DIVISION OF HIGHWAY PLANNING
IN COOPERATION WITH
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

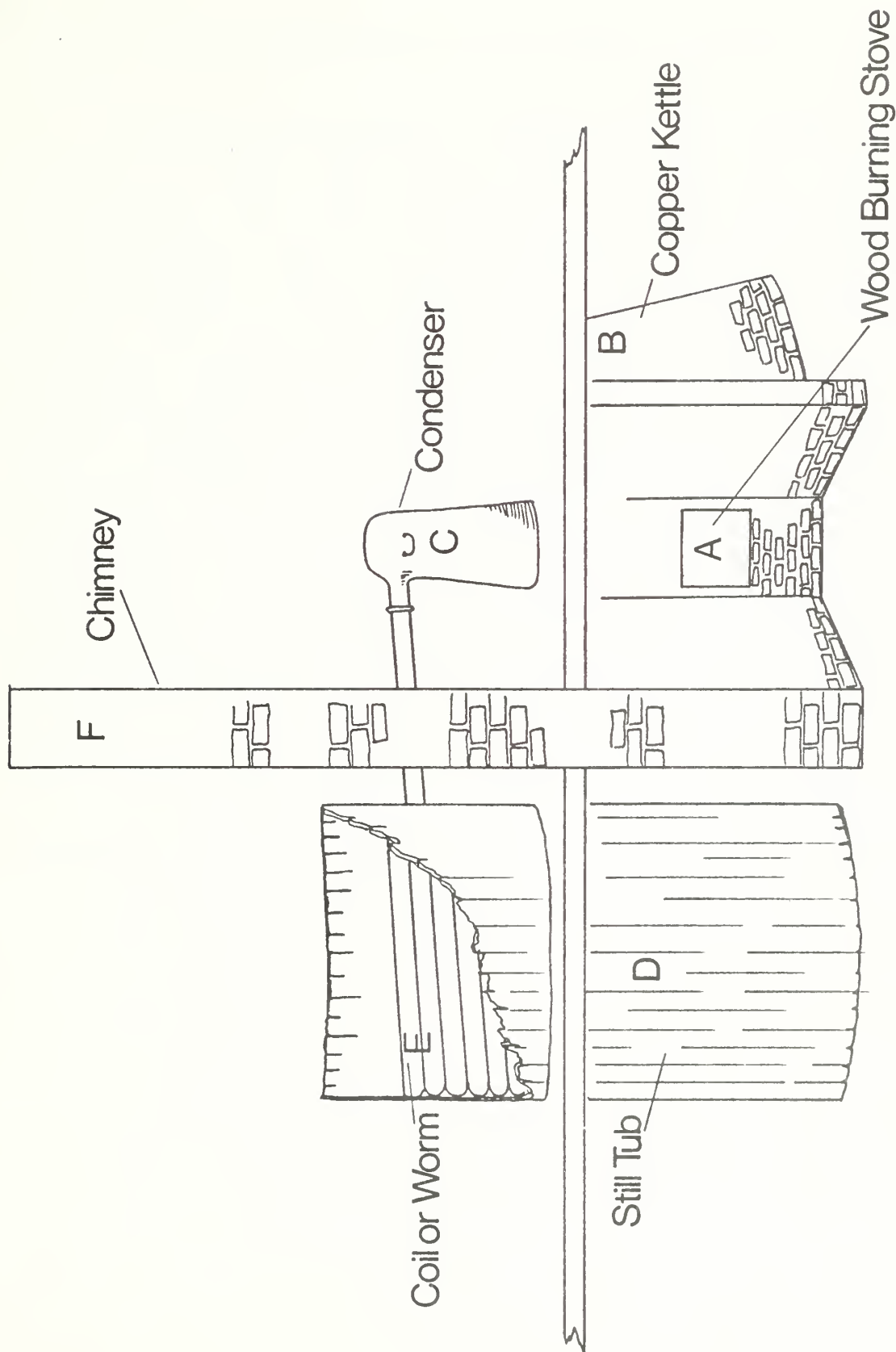
SCALE IN MILES

1970





McCRANIE'S TURPENTINE STILL (THE SITE)



McCRANIE'S TURPENTINE STILL
(THE STILL)

CHAPTER THREE

THE McCRANIE FAMILY AND THE TURPENTINE INDUSTRY

The McCranie family moved to Georgia from Robeson County, North Carolina, circa 1800. Daniel McCranie, Sr. (1772-1854) came first to Bulloch County, Georgia, and then to Montgomery County, where his son Malcolm is said to have been born. Malcolm McCranie, the great-grandfather of the McCranie brothers, was living in Lowndes County, Georgia, in 1830, as were some of his kinsmen. Malcolm McCranie and family remained there in 1840 and 1850. The land on which they resided became Berrien County upon its creation in 1856 and Cook County in 1918. Malcolm McCranie enlisted and fought in the Indian Wars of 1836, and his widow later drew a pension based on this service. In 1827, he had married Elizabeth Parrish, who died in 1839. In December 1839, he married Margaret Jane Flowers, who survived him. They were living by Brushy Creek when he died in 1884 or 1886 in TyTy, Georgia. He was buried at Adel, Georgia.

The youngest of Malcolm's fifteen children was George Flowers McCranie (1863-1957) who moved to Coffee County, c. 1894, from what is now Cook County. He was involved with the turpentine business at four locations, running stills at Leilaton, Willacoochee, and elsewhere. Later his grandsons ran his gum at the present McCranie Still.

George McCranie, Sr. and his son George, Jr., the grandfather and father respectively of the present three brothers, each accumulated considerable acreages of land in their lifetimes. George, Jr. (1892-1959) gave his three sons joint ownership of the present three-acre turpentine still site after he purchased it c. 1936, and built the still, using hand labor, on a

style similar to that used for the previous century. He never turpentineed at another site.

The McCranie brothers were all quite young (16, 15, 13) when the still began operating as "McCranie Brothers Naval Stores." The still was where they "cut their teeth" in the business world. They came home from school and worked there until George and Baker went to war, leaving Shasta at home.

Their father borrowed \$4,000 from Consolidated Naval Stores of Jacksonville, Florida, to start the turpentine still. The McCranies participated in the price support program of the Commodity Credit Corporation, as did most turpentine farmers. They were also subject to federal standards and inspections which checked for impurities and the size of the trees being used.

The still closed in 1942 when the elder brothers went to war and was never reactivated because of the rapid replacement of the fire distillation process by that of steam distillation as well as the shortage of labor caused by the war in progress. Although other stills were destroyed or dismantled for their copper, McCranie's was not, and it remains today in much the same condition as the day it ceased operation.

After the still closed, for a short while the McCranies ran a portable saw mill on the property located on the other side of House No. 2. They continued to collect gum after the still was shut down and took it to steam distilleries at Hoboken, Pearson, and Valdosta. They continued to use the still site for the platform -- to unload and load the gum they collected. They quit turpentineing first in 1965 and resumed in 1972.

Eventually, after World War II, the McCranies entered the creosote business (i.e., wood preserving) on the advice of Forest Products Research of Madison, Wisconsin, under the business name of McCranie Brothers Wood

Preserving, Inc. They are reputedly the largest specialists in fence post treatment in the nation. They also sell timber, tobacco, and cows.

The McCranies belong to the American Turpentine Farmers Association.

CHAPTER FOUR

HARVESTING AND PROCESSING THE GUM

The Basic Resource - The Pine

Before any naval stores products can be obtained, there has to be the basic resource, the pine tree. At McCranie's they originally bought gum to process from other producers in a fifteen-mile radius from their still. Later, c. 1937, they planted the stand of pines that continues to remain uncut to the north and immediately behind the still. They did this planting before the state became interested in planting pines. Since then the McCranies have planted nearly six million pines, sometimes as many as 25,000 per day.

The slash and longleaf pine are the ones used for the gum naval stores industry. It takes approximately twenty-five years for a pine to reach productive maturity; then a tree is productive for approximately eight years for gum-gathering. After that time the tree is used for timber and other wood products. The stumps are also used in another branch of the naval stores industry.

Tree use has been regulated by the federal government since the beginning of the conservation program in the 1930's. This program prescribes the diameter and other specifics of the trees that are to be used. If a tree is over 14 inches in diameter, it can support two faces. Research has been underway to discover higher-yielding pines that take less time to mature.

The age and health of the pines are very important to the end product where grades of resin and turpentine are concerned. Weather, the age of the tree, and disease are important factors that influence the color of gum, and thus, turpentine and rosin. The lighter-colored grades bring higher prices.

Once the trees are mature, the gum-gathering process can begin.

Gathering the Gum or Resin

To obtain resin, gum, or tar from a pine tree, several methods have been employed throughout the centuries. At the McCranie's Turpentine Still, although it was built late in the evolution of the industry, several types of processes were used and are still in evidence at the site.

The earliest method used was the "box," in which the pine trees were crudely cut with a box ax and the resin ran down the scraped area or "face" (wound) on the side of the pine into a box or cup created in the tree itself, usually with a special turpentine hack. This process severely damaged the outer layers of timber and resulted in a great waste of lumber. Depending upon the severity of the cuts and the number of "faces" cut on each tree, sometimes the entire tree was lost.

Dr. Charles Herty's experiments produced the "Herty Cup" (see photographs). The Herty Cup is a clay pot very similar to a flowerpot which, when hung on the side of the tree from a nail, allows the resin to run from the "face" into the cup by means of a galvanized-iron gutter.

At McCranie's, several experimental examples remain from the days when attempts were made to invent better methods of collecting resin through improved cups. The clay cups proved unusable at times, due to the fact that they filled with water, which would freeze in the winter, breaking the cups unless they were placed at an angle. Some of the designs, examples of which the McCranies have kept, that failed to receive widespread usage were the Burdock or triangular cup (the forerunner of the one-quart cup); a round metal cup; a glass cup that broke too easily and a plastic army helmet with which George McCranie experimented, which cracked and bent under hot sunlight and caused the gum to run out. Emerging from these experiments were the tin cups

of one- and two-quart quantities. This two-quart cup, still being used in the turpentine industry, was developed by Ann Shasta McCranie from ideas originating at the McCranie site. It originally cost 12 to 14 cents, but it now sells for approximately 40 cents. They bought their cups from the Lerio Company of Valdosta, Georgia.

The workers would scrape the gum from either the box on the tree itself or from the cups and fill the resin barrels. On the old boxed pines, dip irons were used on the boxes which had to be dipped regularly and properly, or else the "wound" on the tree would "heal." An iron paddle was used to scrape out the cups.

The gutters that were placed on the tree for the resin to run down into the cups were metal and tacked to the trees. They would have to be moved as the face was moved up the side of the pine. Initially the face, or scraping on the tree, was started about six inches above the ground. At the end of each season, a "scrape iron" was used to scrape the resin that was dripping around the borders of the face.

The process of "chipping" (i.e., cutting the face) progressed up the tree during the years of its usefulness. One had to move the cup higher up the pine about every three years and "chip" out a new extension of the face. The maximum height would be about eight or nine feet. Anything above that would be hazardous to the chipper if he sprayed acid on the tree to increase the resin output. Each face was useful for about six to eight years.

After the gum was gathered by the workers going from tree to tree and scraping the gum into barrels, the barrels were loaded onto a truck. Originally this was a mule-drawn wagon which later gave way to a "Hoover Wagon." The truck was then driven to the platform (#10) at the still site and unloaded.

Operating the Still

The barrels of raw gum (or resin) were unloaded on the platform (#10, now gone), which was three feet above the ground, and then rolled up to the top deck of the still (#6) on a skid pole (a type of wooden ramp). There is a U-shaped fixture on the side of the building (#6) for attaching the skid pole onto the still structure. The condenser or cap (C) was then removed and the gum poured into the copper kettle (B). This was called "charging the still." The kettle could hold approximately nine barrels (55 gallons each) of raw gum at one time.

The wood-burning furnace (A) on the lower level was used to heat the turpentine in order for it to rise and flow out of the kettle, through the cap and into the "worm" (E), which is located inside the wooden still tub (D). The kettle, the cap, and the worm, all made of copper, were connected and sold as one item. (See photograph of the Capers Rice Still which shows the copper inner workings without bricks.)

Water was pumped from the pond (9) and was added to the kettle through a 3/4 inch pipe, which came from the tub. As water evaporated out of the gum inside the kettle, more water had to be added to make it steam again. The amount of water needed was regulated by on-site inspection. The steam and turpentine would come through the cap, through the worm, and out into the spirit room in the next building (7).

The wooden still tub which surrounds the copper worm was filled with pond water. The worm makes eight coils inside the still tub, made of cypress stays. The hot water ran off the top of the tub into a ditch, back to the pond, while more cold water was added at the bottom.

The temperature of the resin inside the kettle was read from a thermometer inside the spirit room. Once the turpentine had gone from the kettle, through the cap and the worm, it came in condensed form out of the tail pipe of the worm into the spirit room. The turpentine was then processed through three barrels. It ran from the first to the second and, finally, into the third barrel in which it was shipped. As the first barrel filled with water and turpentine, the latter would rise through the water and flow off, via a siphon, into the second barrel, eventually reaching the third, or spirit, barrel. The water, or "low wine," would drain from the bottoms of the barrels via a stake plug.

One of the hazards of this process was boiling. One had to be sure the gum did not reach the boiling point, or there would be a real mess, and you would have to start over.

The barrels used to collect the distilled turpentine were sealed by glue by a special process at the site. A glue pot was located inside the spirit room and had its own chimney (now gone). The barrels had to be glued, since the turpentine would leak through the barrel stays, whereas water would not.

The barrels were put together on the site by the cooper in the "cooper shed (#4)." The stays, tops, and bottoms were bought already cut. All the cooper had to do was put them together and tighten them. Clay was put into the cracks to prevent leaks, since it would not mix with the turpentine. The barrels were made at the site, because they could not be bought elsewhere.

After the turpentine flowed from the kettle, the residue in the kettle was rosin, a product in itself. Along with the rosin would be many impurities, which had to be filtered out. On the back side of the kettle was a "tail

gate," and when a charge finished cooking and the rosin cooled to a certain temperature, the rosin would be "turned out" through the tail gate into the vat in building #5.

The rosin underwent three straining processes, with each strainer lying on the top of the other and being finer toward the bottom. The last strainer had cotton batten in it. The final product was rosin which was barreled, inspected, and then shipped to the factor or broker.

Once the turpentine barrels were filled, they were inspected to make sure no water had leaked inside. The measuring instrument, called a "thief," was placed into the bottom of the barrel, where any water would have settled.

Originally, there was a track running from the back of the still (#6) to the most distant building (#8). There trucks would arrive, and the barrels of turpentine and rosin would be loaded by rolling the barrels downhill to the loading shed.

The barrels were then carried by truck to Consolidated Naval Stores, a naval stores factor or broker in Jacksonville, Florida, where they were sold. In later processes, metal barrels that had a sampler on the side were used, so that the buyer could pull this out and sample the grade.

The process of working one load of resin from beginning to end required from three to four hours. Usually the day started with the kettle filled the day before with gum and "charged" or started up in the morning without having to be loaded. Three charges a day would generally be processed, each charge being approximately nine barrels. Thus, in a day one could process approximately 27 barrels. The still was operated 5 days a week.

The McCranie brothers were paid 50 cents per charge, or \$1.50 a day if they were lucky, working from 7 a.m. until 6 p.m. The turpentine workers

were paid \$3.00 a week in 1936. (The salary now is approximately \$50.00 a day.) The McCranies employed one hand and one of the brothers at the still itself, while in the woods there were 30 to 32 black workers and perhaps one or two white workers. During the operation of McCranie's Still (1936-1942), some workers were paid 75 cents for every 1,000 faces worked, a worker usually chipping around 1,300 faces per day and producing approximately one barrel of gum. Sharecroppers gave one-half of the daily turn-out to the owner.

Barrels of turpentine sold for about \$4.00 per barrel in 1940; the going rate now is \$103.00 a barrel. A barrel usually contained 435 pounds of gum.

Life at the Still Site

The Main House (#1) is presently occupied by Miss Peggie McCranie. Her father, Baker McCranie, and his bride moved into the main house after their marriage and were the only members of the family to live there during the actual operation of the still. Their first child was born while they lived there.

The second log structure (#2) has always been used as a storage shed; in another log building (#3) lived one of the hands that worked at the site. Mr. Dan Cooper, who was in fact the cooper or barrel maker, lived there in the beginning.

Back of the third log structure are found the remains of the "quarters" or village (#11) where many of the still hands or workers resided with their families. The McCranies furnished many of their workers with a "womb to tomb" existence by providing them a house and water. The houses, many of which are still standing, had individual gardens and glass windows. They did not have a commissary as did other stills (cf. Vickers) or a worship center. When their still closed, the workers moved to other camps or villages or began working the McCranie's wood preserving plant. The workers rarely possessed other skills and thus tried to continue in the turpentine industry.

There were originally fourteen houses in the village and several remain on the site, number nine having been moved down the road to Shasta McCranie's land. The workers who did not live in the village lived in town and commuted to the still. The houses are not presently rented, but at least one was being occupied on the day of our visit.

Women were not employed at the site, but some did live in the quarters.

CHAPTER FIVE

OTHER STILLS IN GEORGIA AND FLORIDA

Although at one time there were many fire-burning stills covering the pine belt of South Georgia as evidenced by the map of turpentine villages in the Appendix, there are few examples left intact today; there are very few in working order.

The McCranie Still is by far the best preserved, as has already been mentioned. Other stills visited by this author include the Vickers Still near Douglas (see photos); the Brooks Still near McRae, and the Travis Cook Still site, also near McRae. The copper inner workings of a still are in front of the Capers Rice Antique Shop in Vidalia, Georgia (see photo) as well as many other remains in the Waycross area and elsewhere, none of which was visited by this author.

The Eli Vickers Still, several miles west of Douglas in Coffee County, is now owned by his son and grandson, Conway and Ken Vickers. Although built about the same time as McCranie's, it has been inoperative for over twenty years. They used the trees on the site, and the complex included a syrup mill, cotton gin, and a commissary. Ruins of these buildings exist as well as other farm buildings. Among the rare features of this operation were the coins issued by "Eli Vickers and Sons Naval Stores" valued from one cent to two dollars. These coins (see photo) were used during the depression to pay the workers when U. S. coinage was scarce. This money was redeemable at the Vickers Commissary as well as in Douglas.⁵⁶

In Telfair County there are remains of the still once run by Mr. W. Kenney Brooks. The property is still owned by his son's widow, Mrs. Stanley Brooks of McRae. Mr. Howard Cartright, who lives immediately next door on a

small tract of his own, formerly worked on the property and discussed its operation with us. The Brooks Still was apparently one of the largest operations in the area during its prime. It was the last fire distillation type to operate in the Southeast, producing 150 barrels in 1958.⁵⁷ All that remains at this site are the copper kettle (still encased in brick, the copper reputedly 3/8 inches thick), several of the strainers used to strain the rosin residue, part of the vat, and a great deal of equipment. The worm or coil is gone. They transported the processed turpentine to the Southern States Naval Stores in Savannah.⁵⁸

At the Travis Cook Still site further west in Telfair County, very little remains at all. Mr. Cook, county commissioner, continues to operate a modern still elsewhere in the county. At the old site, one shed remains, many tin cups which are still used, and some barrels, but none of the copper workings. Only the foundation of the bricked kettle is left.⁵⁹

In Florida

The state of Florida has interpreted "The Old Cracker Turpentine Still" at St. Andrew's State Park near Panama City Beach, Florida. This still was moved to this site around fifteen years ago and does not run. Part of the tub has been removed to show the coils. If this were repaired, the still could run again.⁶⁰

CHAPTER SIX

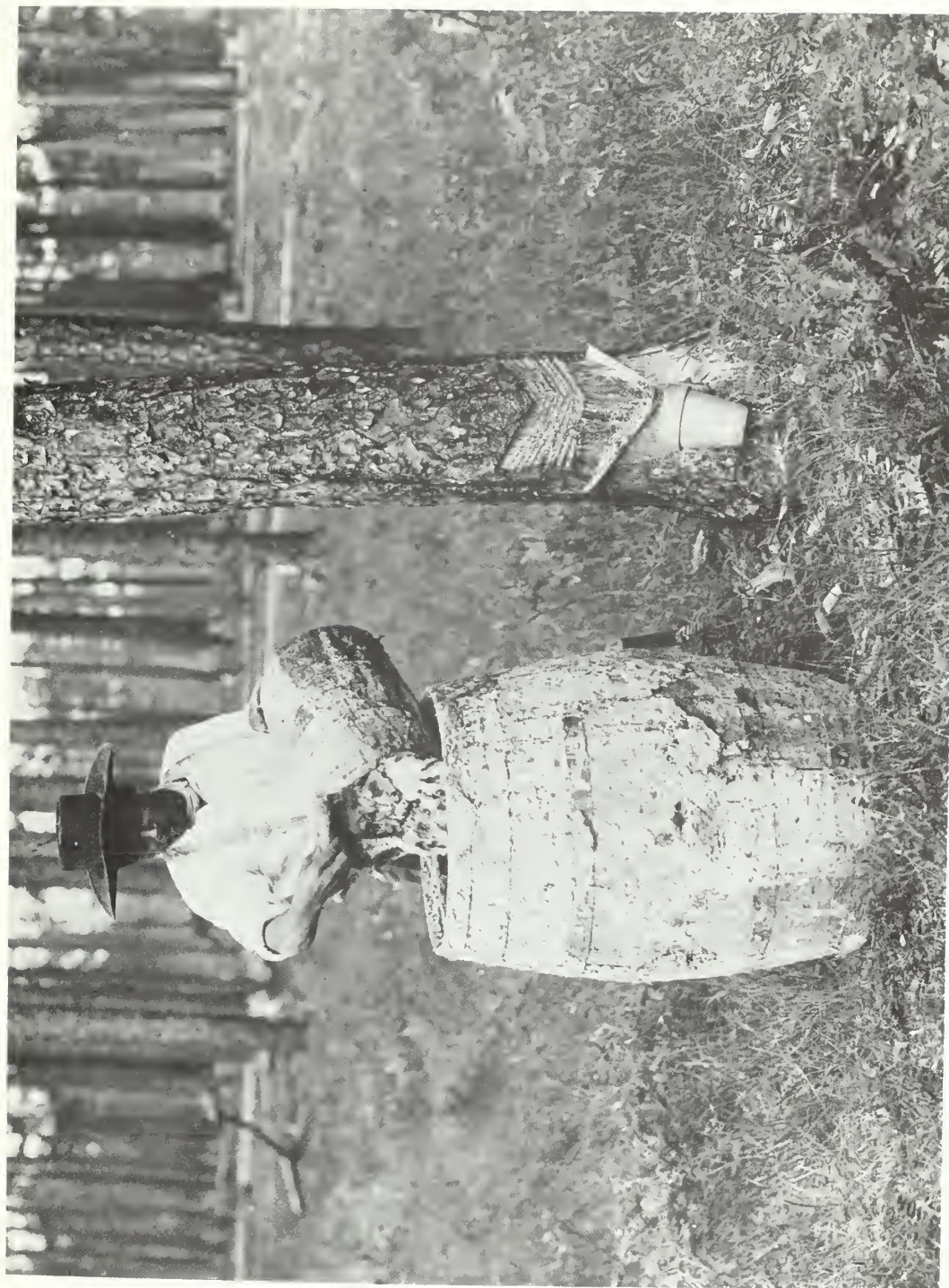
PHOTOGRAPHS



The Herty Cup
[Courtesy of McCranie Brothers, Willacoochee, Georgia.]



Dipping the turpentine cup, Ocilla, Georgia (date unknown). [Courtesy of the U. S. Forest Service, Department of Agriculture.]



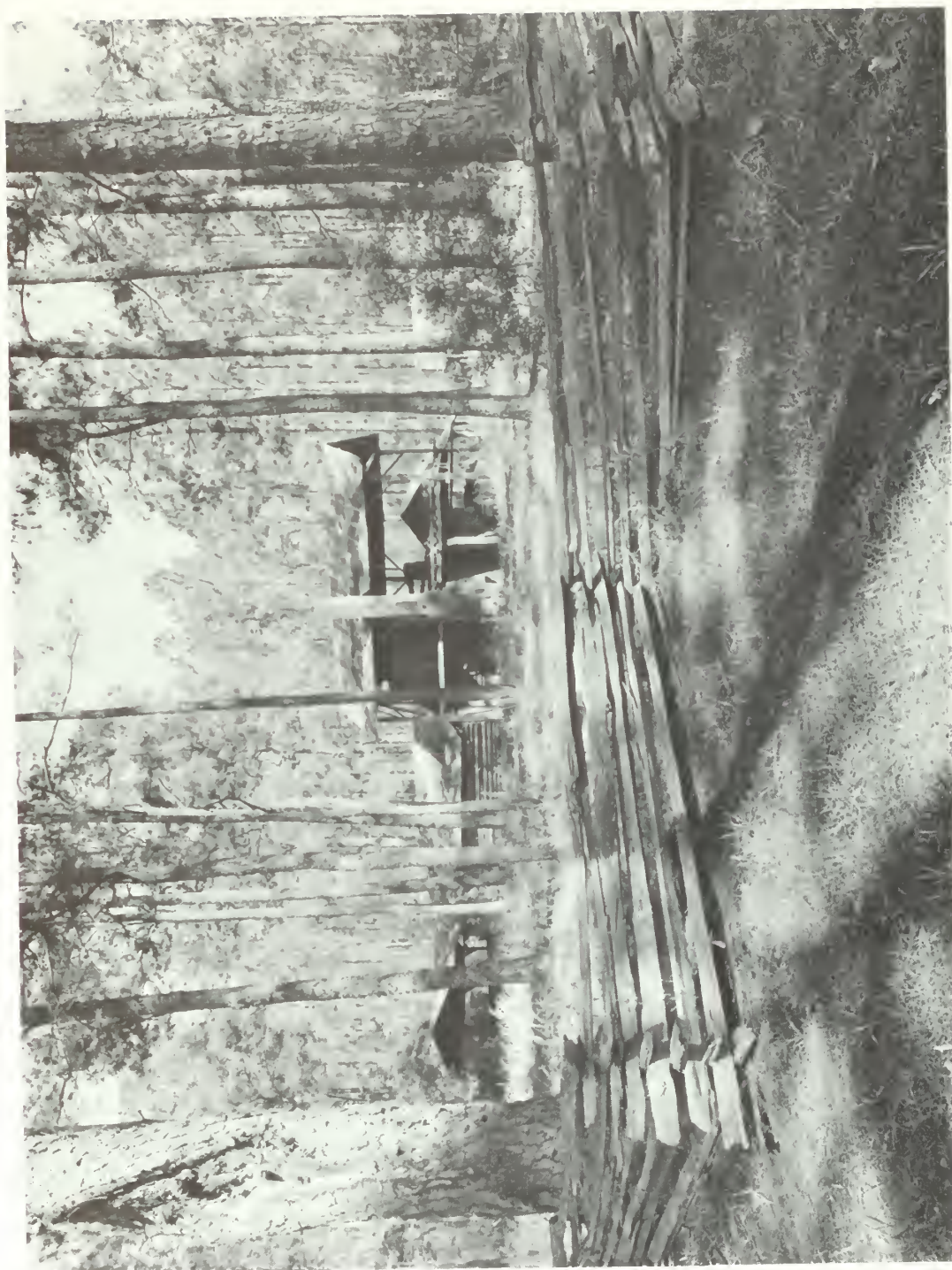
Emptying the gum (resin) carrying bucket, Ocilla, Georgia (date unknown). [Courtesy of the U. S. Forest Service, Department of Agriculture.]



Hauling crude resin from turpentine orchard to still, Ocilla, Georgia (date unknown). [Courtesy of the U. S. Forest Service, Department of Agriculture.]



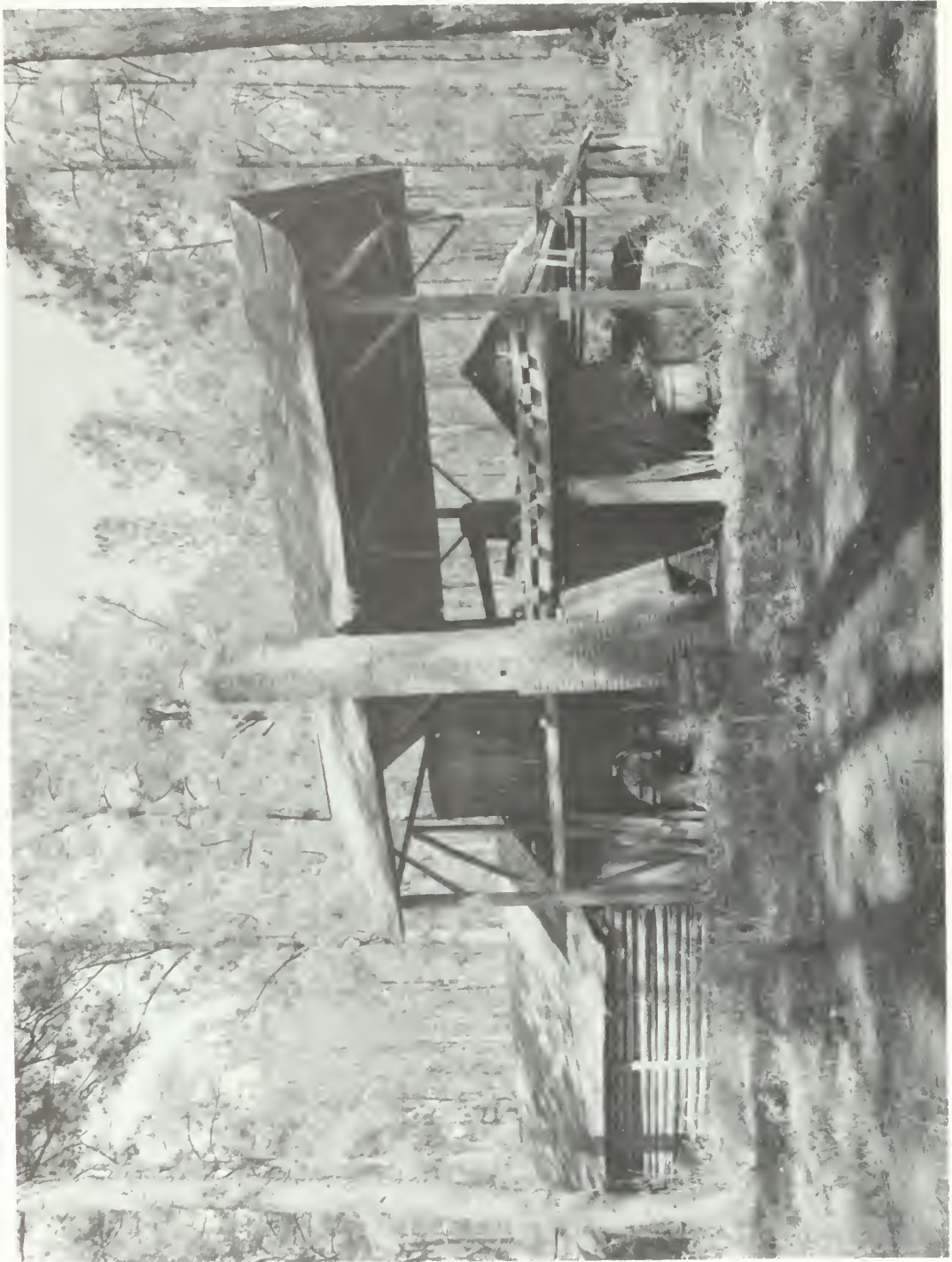
One of the quarters immediately to the east of McCranie's Turpentine Still Complex. This is one of several structures remaining from the Turpentine Village.



McCranie's Turpentine Still Complex, as viewed from U. S. Highway 82, facing north.



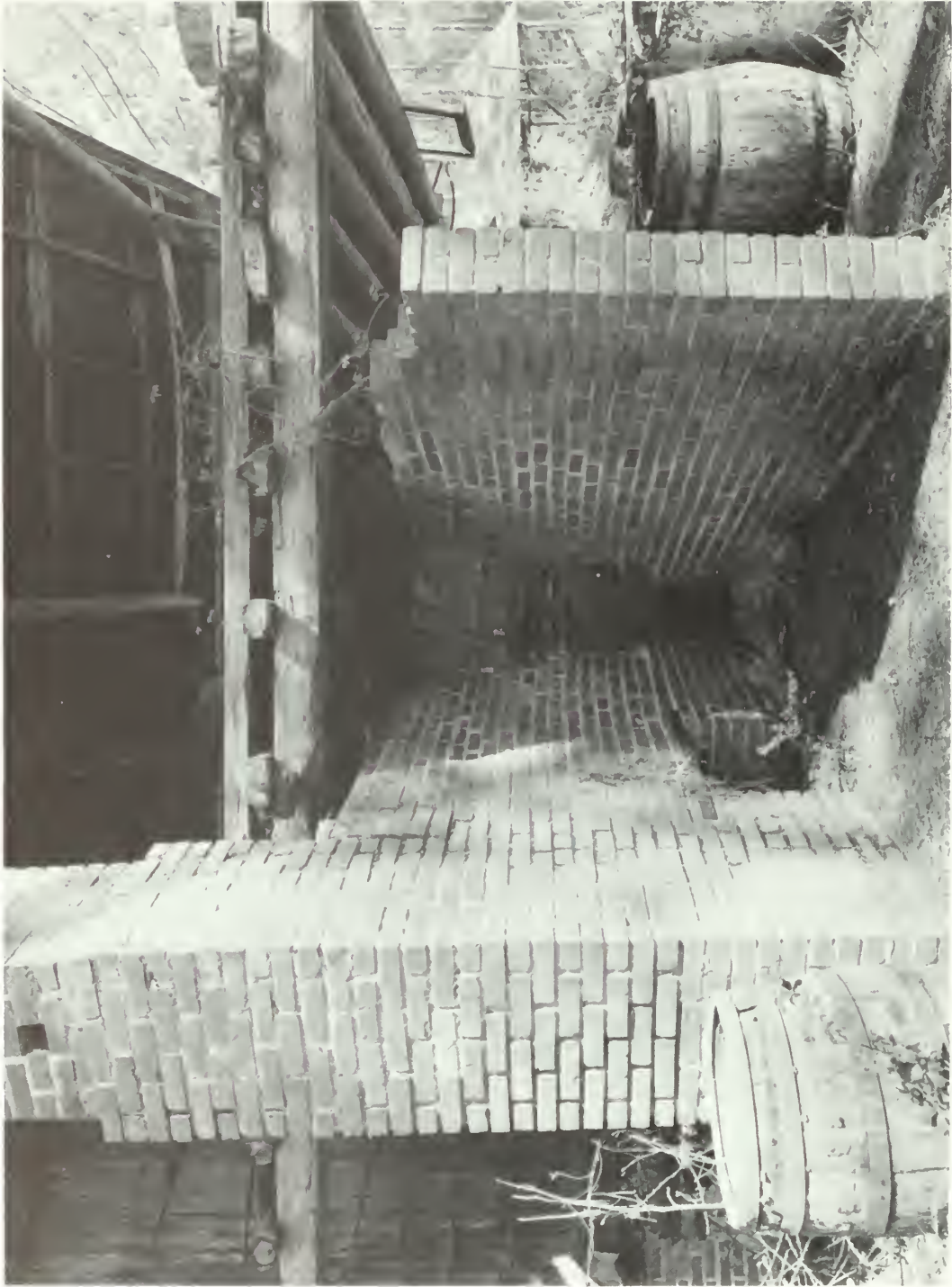
The main house (right) and the storage shed (left) at McCranie's Turpentine Still.



The main building (center), with the "spirit room" on the left at McCranie's.



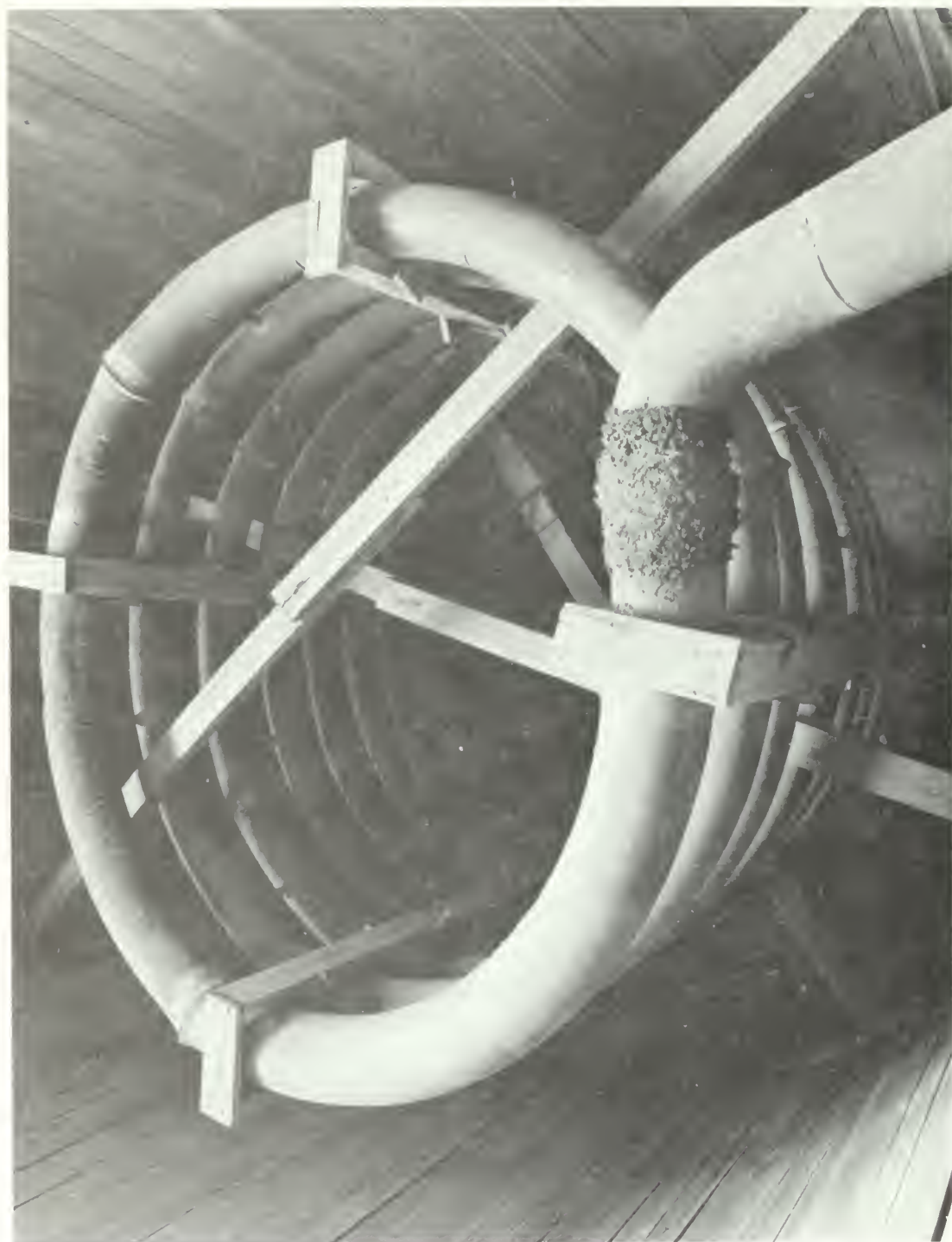
The third log structure, wherein lived the cooper and, later, other still workers.
Photograph taken looking east.



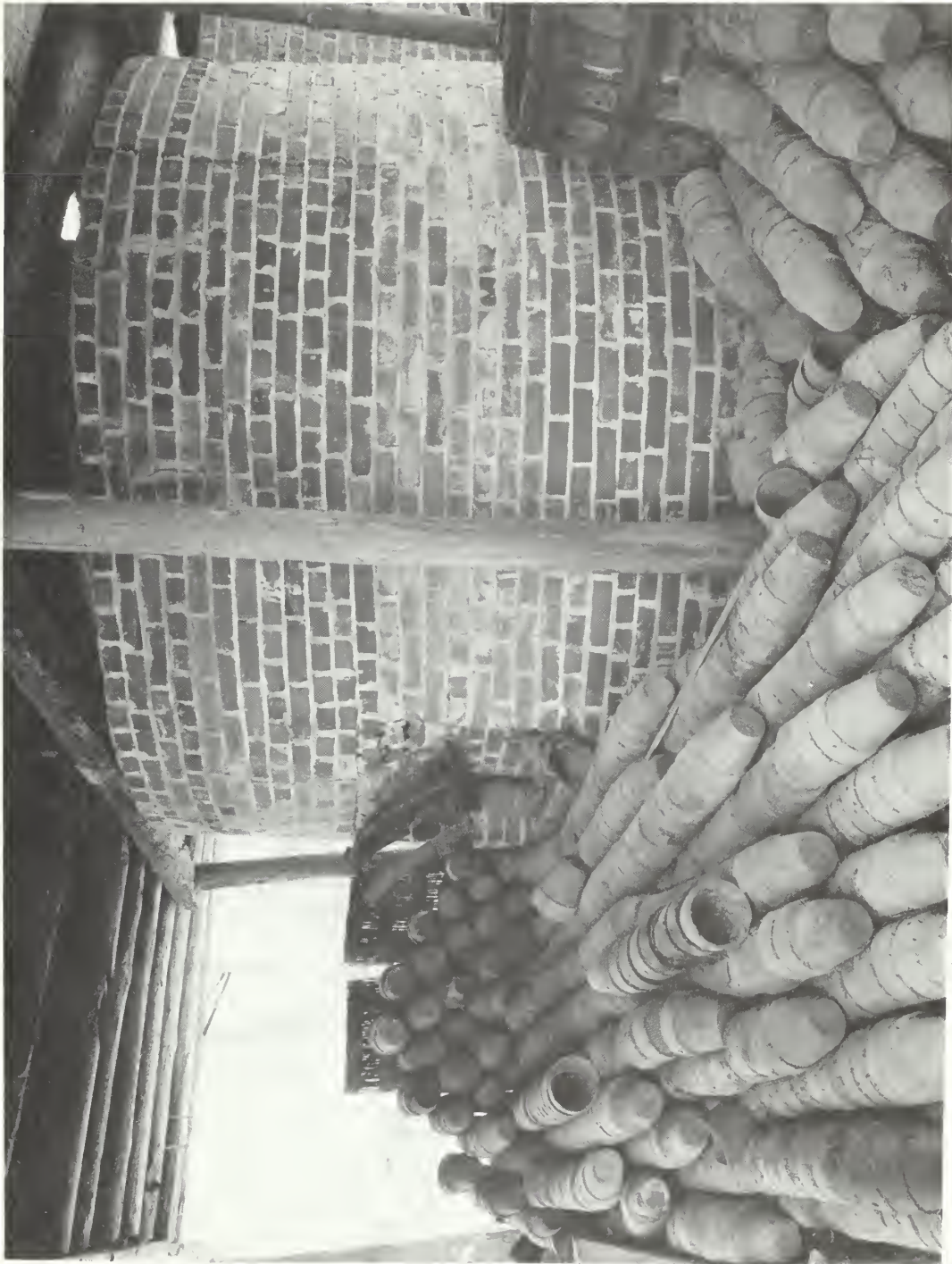
The oven and chimney. Here, the fire was started for the distillation process.



The condenser and still tub on the top deck at McCranie's Turpentine Still.



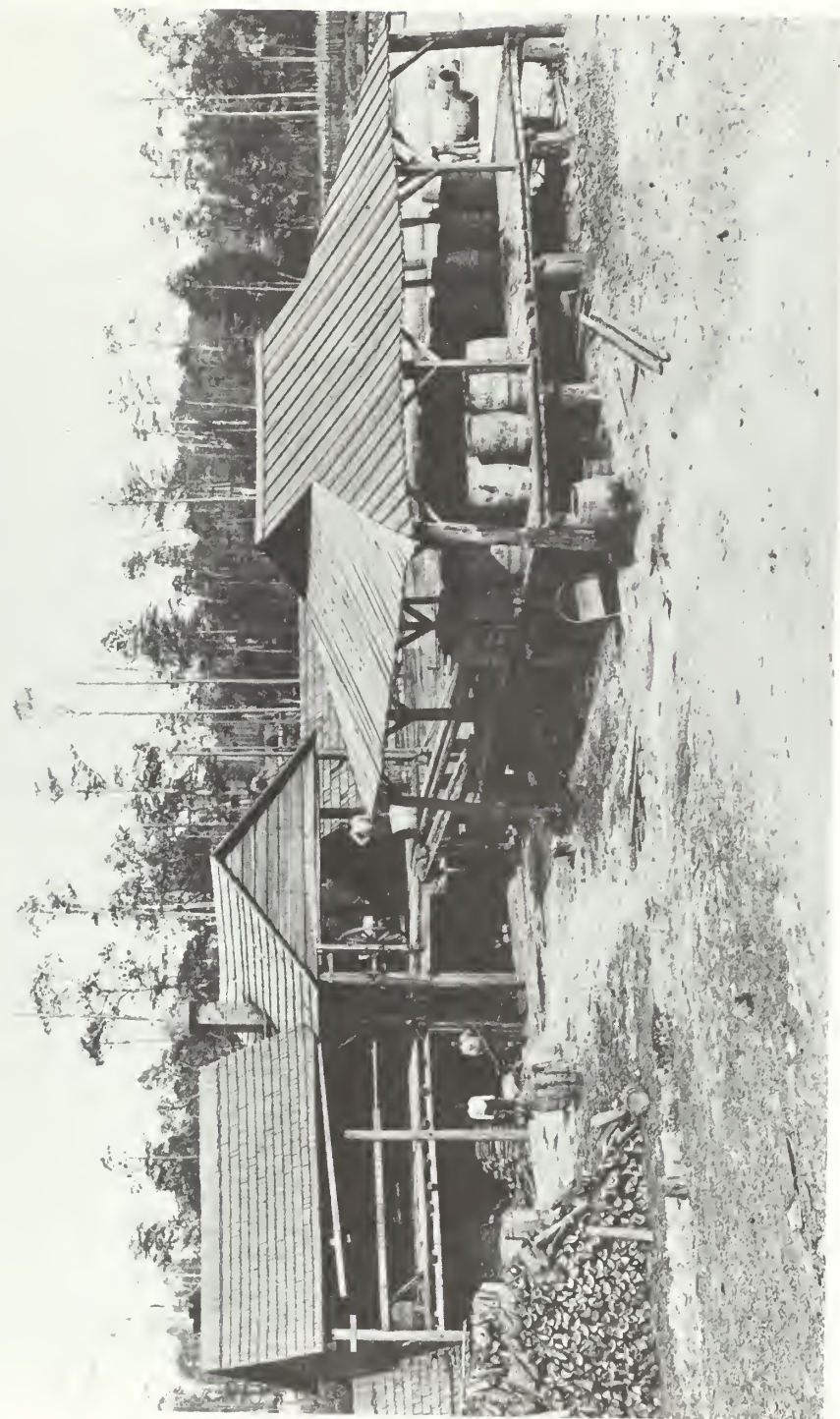
The "worm" or coil inside the still tub.



Underneath the "top deck," in the center, is the "tail gate" coming out of the copper kettle, encased in bricks. Thousands of Herty Cups are stored here.



The vat where rosin was strained after coming out of the kettle via the tailgate.



Turpentine still at Ocilla, Georgia (date unknown). [Courtesy of the U. S. Forest Service.]



The copper kettle, condenser, and coil at the Capers Rice Antique Shop, Vidalia, Georgia.



The remaining kettle (copper covered with bricks) at the Brooks Still near McRae, Georgia. Tom Rawls is atop the kettle; Howard Cartright, in foreground.



"Coins" used to pay workers of Eli Vickers & Sons Naval Stores of Douglas, Georgia, during the hard times of the Depression era. The left-hand coin is a half-dollar piece. They are shown at approximately double their normal size. [Courtesy of Ken Vickers of Douglas, Georgia.]



Rosin Yards at Savannah, Georgia. [Courtesy of the U. S. Forest Service, U. S. Department of Agriculture.]

FOOTNOTES

Chapter One: The History of the Naval Stores Industry and Georgia's Position

- ¹ C. Dorsey Dyer, "History of the Gum Naval Stores Industry," AT-FA Journal, January, 1963 (pages numbered 1-6 reprinted), p. 2.
- ² John Brickell, The Natural History of North Carolina (Dublin, Ire.: 1737), pp. 265-267. Reprinted in Aubrey C. Land's (ed.) Bases of the Plantation Society (Columbia, S. C.: 1969), pp. 137-139. He indicated they used a copper "vesica" or "alenbick," in which to distill the rosin.
- ³ Dyer, p. 3.
- ⁴ G. Melvin Herndon, "Naval Stores in Colonial Georgia," The Georgia Historical Quarterly, Vol. LII, December, 1968, p. 428.
- ⁵ Thomas R. R. Cobb, A Digest of the Statute Laws of the State of Georgia (Athens, Ga.: 1851), pp. 10-12.
- ⁶ Herndon, p. 431.
- ⁷ Percival Perry, "The Naval-Stores Industry in the Old South, 1790-1860," The Journal of Southern History, Vol. XXXIV, 1968, p. 512.
- ⁸ Ibid., p. 513.
- ⁹ Ibid., pp. 514, 515.
- ¹⁰ Dyer, p. 3.
- ¹¹ Perry, pp. 515, 517.
- ¹² Ibid., pp. 518, 519.
- ¹³ Ibid., p. 520.
- ¹⁴ Ibid., p. 521.
- ¹⁵ Ibid., p. 524.
- ¹⁶ Ibid., p. 525.
- ¹⁷ Ibid., p. 516.
- ¹⁸ Ibid., p. 510.
- ¹⁹ Ibid., p. 525.

- 20 Warren P. Ward, Ward's History of Coffee County (Atlanta: 1930), pp. 311, 312.
- 21 Willard Range, A Century of Georgia Agriculture, 1850-1950 (Athens, Ga.: 1954), p. 155.
- 22 Dyer, p. 4. Also, Naval Stores International Yearbook 1948 and later issues.
- 23 Dr. Charles Holmes Herty Papers, Special Collections, Woodruff Library, Emory University, Atlanta, Georgia [hereafter referred to as "Herty Collection" with "CHH," referring to Dr. Herty]; box labeled "Clippings." Article written by Herty in April, 1906, issue of Cotton Trade Journal.
- 24 Dyer, p. 5 of reprint.
- 25 Herty Collection.
- 26 Herty Collection. CHH correspondence for 1900 with the replies included from the various groups to which he wrote.
- 27 Ibid., for 1901. There are very few letters from this period with the exception of the U. S. Forest Service.
- 28 Ibid., for 1902. A very extensive set of letters to CHH from the U. S. Forest Service. Unfortunately, we do not have any of CHH's letters or copies of his letters to the Forest Service for this year.
- 29 Ibid., box labeled "Herty Turpentine Cup" contains his copy of the original patent application.
- 30 G. P. Shingler, "The First Naval Stores Revolution," Naval Stores Review, February 16, 1952, pp. 14ff.
- 31 Herty Collection, for 1902. In these letters are many references to his lectures, among them the request of Thomas Gamble, editor of Naval Stores Review [weekly], for a copy of the lecture Herty was to deliver before the Turpentine Operators Association on September 2 or 3, 1902 [Thomas Gamble to CHH, August 2, 1902.]
- 32 Chart from the Naval Stores Review International Yearbook, 1948, p. 37.
- 33 A. Stuart Campbell, et al., "The History of the Naval Stores Industry," Studies in Forestry Resources in Florida, III: The Naval Stores Industry [University of Florida Publication: Economic Series: I(5), May, 1933, revised May, 1934], p. 14.
- 34 Ibid., Chapter VII, "Government Assistance to, and Regulation of, the Naval Stores Industry," p. 79.
- 35 Ibid., p. 80.

- ³⁶ Ibid., pp. 76-87.
- ³⁷ Ibid., pp. 81ff.
- ³⁸ Ibid., pp. 84ff.
- ³⁹ Milton S. Briggs and Robert E. Freeman, "Price Support Programs for Gum Naval Stores, 1934-1948," Naval Stores Review International Yearbook, 1948, pp. 107ff.
- ⁴⁰ The [Weekly] Tifton Gazette, July 23, 1936, p. 6, c. 4, "Naval Stores Office in Savannah and Jacksonville;" and August 16, 1936, p. 3, c. 4, "Final Days for Turpentine Sheets." Also, H. E. Howard, "The Naval Stores Conservation Program," Naval Stores Review International Yearbook, 1948, pp. 105ff.
- ⁴¹ Ibid., January 2, 1941, p. 6, c. 2, "Continue Turpentine Loans."
- ⁴² Judge Harley Langdale, "The American Turpentine Farmers Association Cooperative," Naval Stores Review International Yearbook, 1948, pp. 112ff.
- ⁴³ Naval Stores Review, April 28, 1951, "Spray Gun Boon to Gum Industry," p. 28.
- ⁴⁴ Dyer, p. 6.
- ⁴⁵ T. A. Wastler, Naval Stores Industries - Research News, Bulletin 20 (Engineering Experiment Station, Georgia Institute of Technology, 1954), pp. 15-19.
- ⁴⁶ Ibid.
- ⁴⁷ Ibid., pp. 19-24.
- ⁴⁸ Ibid., pp. 55, 56.
- ⁴⁹ Tze I. Chiang, et al., A Study of the Problems and Potentials of the Gum Naval Stores Industry (Engineering Experiment Station, Georgia Institute of Technology, 1971), p. 2.
- ⁵⁰ Ibid., p. 4.
- ⁵¹ Ibid., p. 7.
- ⁵² Ibid., pp. 11, 12.
- ⁵³ Ibid., pp. 11-18.
- ⁵⁴ Ibid., p. 1.
- ⁵⁵ Ibid., p. 18.

Chapter Two: The Land

This information is based upon personal knowledge; the Land Lottery of 1820 grant books located in the Surveyor General Department, Office of the Secretary of State; and conversations with the McCranie Brothers. The deed to the property was dated July 6, 1937, and was recorded August 9, 1939, in Deed Book 16, pp. 266, 267, Superior Court, Atkinson County, Georgia. It is for 97 acres surrounding the still site; the deed to the original three-acre still site has not been located by the family.

Chapter Three: The McCranie Family and the Turpentine Industry

This chapter is based upon conversations held with the McCranie Family; Folks Huxford's Pioneers of Wiregrass Georgia, Vols. I and II; United States Census Returns of Population for 1830-1880; National Archives and Records Service, Indian War of 1836 Pension Claim of Margaret J. McCranie, widow, dated October 8, 1892.

Chapter Four: Harvesting and Processing the Gum

The three parts of this chapter are all based upon conversations with the McCranie Brothers on December 17, 1974, and the tour that day of the still site with the author. Some elaborations were made for the sake of clarity.

Chapter Five: Other Stills in Georgia and Florida

- 56 Conversation with Conway and Ken Vickers on December 18, 1974, at the Vickers' Still site in Coffee County, Georgia.
- 57 Naval Stores Review, Vol. LXIX(3), June, 1959, p. 6.
- 58 Visit to the site on December 18, 1974, by the author and conversations that day with Howard Cartright and Alvin Moon, who used to work there. Also, a telephone conversation with Mrs. Stanley Brooks of McRae, Georgia, on April 1, 1975.
- 59 Visit to the site on December 18, 1974, and conversation with Alvin Moon of Telfair County, Georgia.
- 60 Telephone conversation, May, 1975, with Lt. Tom Francis, interpretative naturalist of the Florida Department of Natural Resources, who is site superintendent.

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- "Everything from Grass to Glass -- the Story of the Herty Foundation," Pulp and Paper, May 13, 1968 (reprinted and distributed by the Herty Foundation, Savannah, Ga.).
- Filtered Resin Products, Inc. Records of this company from 1940 to 1959 have been microfilmed by the Georgia Department of Archives and History and are located there on Reel 223-15. They are mainly statistical and were not useful in this report.
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Further Research Being Conducted

At the writing of this paper it has come to the attention of the author that there are many other sources yet untapped due to the scope and limitations for this paper. There are also many persons and institutions conducting research on the Turpentine/Naval Stores Industry.

Mrs. Gaynell Wright will complete her master's thesis in anthropology this summer at the University of Georgia. Her topic will be "Turpentine Workers of South Georgia" which has caused her to interview many turpentine workers from South Georgia.

Dr. Albert Ike of the University of Georgia, Institute of Community and Area Development, is coordinating efforts for a film about the sociological aspects of the turpentine industry, especially the villages that were formed around the stills.

Mr. Jeff Dobson, a graduate student working on his Ph.D. in the Department of Geography at the University of Georgia, has delivered two papers on the turpentine industry, both relating to his upcoming dissertation. The first is entitled "Locational Trends in the United States Gum Naval Stores Industry: Past, Present, and Future," delivered at the Southeast Division of the Association of American Geographers, November, 1974, at Biloxi, Mississippi. The second was delivered in April, 1975, at the Georgia Academy of Science in Savannah, Georgia, and was entitled "Gum Naval Stores Production in the United States South, 1700 to the Present." He is in contact with many of the current research projects concerning the industry, and his emphasis on climatic variables to predict turpentine production is invaluable.

The Georgia Historical Society, Savannah, Georgia, has been the beneficiary of funds from Mr. John Laws and the Filtered Resin Products

Company of Baxley, Georgia, "to establish a collection of papers and publications on the history of the gum naval stores industry." The membership of the society is being asked to notify the society of sources of information. Mr. Laws' daughter is Connie Stephenson, newsletter editor of the society.

There are probably many other valuable sources of information on the gum naval stores industry that have not come to this author's attention. However, the sources mentioned above should be contacted by anyone doing further research into the industry.

Further Research Sources

Due to the scope of this paper and the limited time and needs available to do research, many sources were not checked thoroughly. It is suggested that anyone continuing research in this field should begin with these sources.

The papers of Dr. Charles Herty, who as mentioned above, developed the clay "Herty Cup" c. 1902, are at Special Collections, Woodruff Library, Emory University in Atlanta, Georgia. They have not been extensively searched except for 1900-1902, the years of his turpentine cup research at Ocilla, Georgia.

Contact was also not made with the American Turpentine Farmers Association of Valdosta, Georgia, or with the research staff from Lake City College, Florida.

The papers of Thomas Gamble, b. 1868, editor of Naval Stores Review and compiler of Naval Stores: History, Production, Distribution, and Consumption, (1921) are located at the Savannah, Georgia, Public Library.

Gamble's Naval Stores Review, a weekly publication from 1890 to 1941, has not been located at any repository in the Atlanta area and may also be found in Savannah. A thorough search through these as well as the annual Yearbook should yield a wealth of information on the rise and decline of Georgia' turpentine industry.

The Herty Foundation of Savannah, Georgia, stems from Dr. Herty's efforts with the pulp industry. It conducts research into better uses of pulp and the making of newsprint but could be a source for the pine industry in all its aspects.

There are many branches of the United States Department of Agriculture that have not been checked, such as the U. S. Forest Products Laboratory of Madison, Wisconsin, founded c. 1910; U. S. Forest Service Main Office in

Washington, D. C.; and the various southern experimental stations. The Forest History Society, created in 1946, moved to Yale University in 1964. It has issued the Journal of Forest History for the past 19 years.

While these sources have not been checked by this author, they should prove extremely valuable to a student of the turpentine industry in Georgia.

APPENDICES

- A. Family History
- B. Tax Records of McCranie Brothers' Naval Stores During Years of Operation
- C. Conversation with Mrs. R. Allen Willis
- D. Directions for Installing Cup and Gutter System
- E. Georgia Turpentine Distilleries -- 1901
- F. Naval Stores Statistics
- G. Fifty Uses of Turpentine in 1930
- H. Correspondence

Appendix A

FAMILY HISTORY CHARTS

HUSBAND Malcolm McCranie (Veteran of 1836 Indian wars)

BORN Oct. 25, 1802 **PLACE** Georgia or North Carolina
Nov. 25, 1884 or
DEATH Sept. 23, 1886 [?] PLACE Ty Ty, Ga. (Tift County)
BURIED Salem Primitive Baptist Church Cemetery
(Lime Sink Cemetery, Adel, Georgia)
FATHER Daniel McCranie, Sr. MOTHER Sarah McMillan

MARRIED TO:

DATE 1827
PLACE Irwin County, Georgia
(d. Feb. 12, 1839)

Margaret Jane Flowers **PLACE** Lowndes County, Georgia

CHILDREN	BORN	DIED	WHERE DIED
Sarah	1830		
Daniel J.	1832		
Nancy	1834		
Martha A.	1836		
Mary C.	1837		
Josiah	1839		
William Calvin	1840		
Eliza	1841		
Melvina	1842		
Elizabeth	1844	8/14/1904	
Caroline	1847		
Catherine	1849		
Winnie E.	1855		
Barney Sineath	1859		
George Flowers	2/6/1863	4/11/1957	

WIFE Margaret Jane Flowers

BORN Dec. 21, 1820 **PLACE** Laurens County, Georgia
DEATH April 29, 1908 **PLACE** Salem Primitive Baptist Church Cemetery
BURIED (Lime Sink Cemetery, Adel, Georgia)
FATHER Wright Flowers **MOTHER** Mary

MARRIED **PLACE**

FATHER
Birth Place
Death Place
MOTHER
Birth Place Place
Death Place Place

WHEN MARRIED	WHERE MARRIED	MARRIED TO
		W. Barney Sineath
		Flora Ann Parrish
		James W. McKinney
		William C. Lindsey
		John L. Matthews
		Mary M. Sineath
		Sarah Kirby
12/23/1866	1. Henry Sineath 2. H.K. Hutchinson	
2/16/1868 8/20/1871	1. William Bessant 2. John F. Parrish	
		Robert Hutchinson
		George W. Mims
		Mollie Hodges
		1. Nona Grissett 2. Ida Paulk

HUSBAND George Flowers McCranie, Sr.

BORN Feb. 6, 1863 **PLACE** Cook County, Georgia

DEATH April 11, 1957 **PLACE** Willacoochee, Georgia

BURIED City Cemetery, Willacoochee, Georgia

FATHER Malcolm McCranie **MOTHER** Margaret Jane Flowers

MARRIED TO:

DATE March 18, 1890

1. Winona Elneitta Grissett **PLACE** Waynesville, Georgia

DATE

2. Ida Deborah Paulk

PLACE Coffee County, Georgia

WIFE Winona "Nona" Elneitta Grissett

BORN Oct. 22, 1871 **PLACE**

DEATH Aug. 19, 1901 **PLACE** Willacoochee, Georgia

BURIED Adel, Georgia (church cemetery)

Judson

FATHER DeKalb Grissett **MOTHER** Anna Mary Flemming

PARENTS OF SECOND WIFE, IDA DEBORAH PAULK:

FATHER T.L. Paulk

Birth March 17, 1882 **Place** Coffee County, Georgia

Death Oct. 22, 1921 **Place** Willacoochee, Georgia

MOTHER

Birth **Place**

Death **Place**

WHEN MARRIED	WHERE MARRIED	MARRIED TO
8/4/1918		Margaret Ellen Baker
1919		Timothy Thomas Murphy
		H. - O'Brien
		Ralph Davis
		Myrtle Slade
8/3/1943		Morgan Calloway Stanford

CHILDREN	BORN	DIED	WHERE DIED
George F., Jr.	3/11/1892	6/25/1959	Augusta, Ga.
Clyde Fleming	4/12/1894		
CHILDREN BY SECOND WIFE			
Winona Elneitta	12/23/1903	9/6/1906	Willacoochee, Ga.
Naomi	10/24/1905	9/25/1964	"
Ulysses Shasta	7/7/1907	6/28/1916	"
Etteinne (F.)	11/13/1909	12/10/1940	"
Donald Carlyle	9/28/1911	11/1922	"
Emory	11/22/1915	10/3/1916	"
Carl Von Emden	10/1/1913		
Celeste	4/11/1918		

Appendix B

TAX RECORDS OF McCranie Brothers' NAVAL STORES
DURING YEARS OF OPERATION

[Source: Georgia Department of Revenue Tax Digests for each year cited (bound alone). Deposited at Georgia Department of Archives and History.]

1936 Georgia Militia District (GMD) 1026, Willacoochee District, Atkinson County, Georgia

McCranies: Emden, Celeste, estate of Ida D., George F., Jr., and as agent for George F., Sr.

Paulk, T.L. estate - 100 acres, lot 477, 5th District	
100 acres, lot 478, 5th District	\$400
Total for tax purposes	<u>\$400</u>

/s/ June 18, 1936 by Recorder of Tax Returns

1937 Same location

McCranie Brothers Naval Stores	
3 acres of lot 477, 5th District; market value	\$500
Total	<u>\$500</u>

1938 Same location

McCranie Brothers - 100 acres, lot 478, 5th District	
3 acres, lot 477, 5th District	\$400
"Market value of mineral and timber leases and market value of all other property not mentioned"	\$500
Total value for tax purposes	<u>\$900</u>

1939 Same location

McCranie Brothers - 100 acres, lot 479, 5th District	
3 acres, lot 477, 5th District	\$400
Other	\$500
Total for tax purposes	<u>\$900</u>

(Continued on next page)

Tax Records for McCranie Brothers (continued)

<u>1940</u>	Same location		
	McCranie Brothers -	3 acres, lot 477, 5th District	\$ 20
		Value of timber, other property	\$400
		Total	<u>\$420</u>
		[Penciled entry] Auto value	\$240
		Total	<u>\$660</u>
<u>1941</u>	Same location		
	McCranie Brothers -	Land valued at	\$ 20
		Auto	\$240
		Other	\$400
		Total	<u>\$660</u>
<u>1942</u>	Same location		
	McCranie Brothers [same as 1941]		
		Total value	\$660
<u>1943</u>	Same location		
	McCranie Brothers -	Land	\$ 40
		Auto	\$175
		Market value of cotton, corn and other farm products	\$400
		Total	<u>\$615</u>
<u>1944</u>			
	No McCranie Brothers listed		

Appendix C

Conversation with Mrs. R. Allen (Ida Bethea) Willis of Greenwood, Florida, formerly of Carabelle, Florida. One conversation was taped on October 12, 1974, at the home of her granddaughter, Elizabeth (Ziegler) MacGregor of Atlanta, and the other transcribed on April 20, 1975, at the same location but in the presence of the author as well as a film crew who were filming and taping Mrs. Willis for an upcoming educational film on the turpentine industry, especially the social aspects. Sentence structure has been added.

Mrs. Willis was from South Carolina when she met and married Mr. Willis, who died in 1974. She joined him at a turpentine still complex that he owned and operated in Carabelle, Florida.

Her husband would go on horseback into the woods where the men would be out working by 5 a.m. or at least by daylight. He stayed until lunch around 1 p.m. in order to check on the men. He would then return home for lunch and take a nap afterwards. When he returned to the woods, she would sometimes go with him.

The still was not run every day because they did not have enough gum to warrant that.

Their site consisted of approximately 11,000 acres, including a place called "Tate's Hell," which was a swamp. He often told her about how he got lost there before they were married. He tried to walk home, and he built fires along the way. He tried to line up the fires and follow them out. He eventually ended up back at one of his own fires and had to wait until daybreak to find his way out.

They were located on the New River, 20 miles north of the town of Carabelle, Florida. It took three hours by boat. By horse, the trip took "no time," but you had to "swim" the horse across the river. Usually the boat was very old and would break down.

On her first trip there after her marriage, it took three boats to get up the river. They nicknamed her "Jonah." When she arrived, every window was full of Negroes looking out to see the owner's wife. There were approximately 25 houses from which these people were peering to see the new lady from "up north," meaning, of course, South Carolina.

There were very few white children at the site, and she recalls no Negro children being there.

She slept with a pistol when her husband was away.

There was a "dummy" or mute who brought her a ham once. He got robbed and could only cry.

On May 20th, the Negroes had a holiday to celebrate "freedom day." They would slaughter hogs and have a big barbecue.

She got mail every other day and read it at night.

Her husband, Allen, had been there almost two years when she arrived in June, 1915. She lived there less than two years because by the time she had her first child, in 1917, she had moved to Greenwood, Florida.

Her daily activities included embroidery, making tablecloths and napkins, and cleaning the house. She cooked for only two people. They kept chickens, and the Negroes often offered her food.

Problems arose in their turpentine business when, during World War I, the market in Germany closed down due to the war. They were forced after that time to lease the property and eventually sell it.

Even though they could not sell the product, they had to keep working the trees. The resin and turpentine were kept outdoors in barrels. One time they had real high water, and the barrels just floated down stream.

She came back to the turpentine site after a miscarriage which had caused her to go to a hotel in Carabelle. She was cared for by her mother-in-law, "Ma Lizzie." Her father-in-law, "Dr. Willis" was a real doctor. "Ma Lizzie" was like a nurse to him.

Allen pulled teeth for the Negroes by using forceps. She felt that very few people ever got sick while she was there.

Foods they had included cabbage, deer meat, pork and beans.

After they moved in the fall of 1917 (?) to Greenwood, they first farmed on Dr. Willis' land for a year; then they ran a store; and then Allen became cashier and president of a bank. When he closed this bank, he caused somewhat of a stir and made the cover of Life, February 14, 1952, because he was one of the few banks ever to close without having any loss.

Allen was one of the first to plant pines and conserve pines (in Greenwood). It was very unique to be one to do that. A man later came and cut some down for a house. They tried to take him to court. This took place in the 1930's. People just did not understand the value of pines.

They sold caskets in their store, and "Ma Lizzie" often acted as an undertaker.

At Christmastime they would go "home" and leave one white man in charge of the still.

She related one incident where a "Jew" from Chicago wanted to buy land and brought a carload of folks from Chicago. They lost everything due to a bad check from the Jew, who then skipped the country.

The people came by train and boat. Had no place to sleep. They had even brought their furniture and possessions with them. They were to be located just a few miles up the river at a "Colony." She does not know what happened to them.

She never did see many newcomers.

Negroes would come from other stills on payday and gamble all night. She didn't know what type of gambling (i.e., what game).

The Camp or Village: The Negro houses were away from them so she did not ever hear much noise. Many of the Negroes were ex-convicts. One Negro couple came from South Carolina. There were perhaps 100 families there. There was no church. They could have gardens if they wanted.

There was a Commissary. It was managed by Mr. Willis. It would be open in the afternoons after the workers came in from the woods. It had mostly canned goods, especially pork and beans. She ate an awful lot of them and grew tired of them. She never ran the store herself. They kept a record of what the Negroes owed.

The main house was next to the river. Their house was away from the river. There were no swamps around. Tate's Hell was on the other side of the river. The still had an artesian well with lots of sulphur in it.

If a doctor was needed, you had to get one by boat from Carabelle. He was not a real doctor, just a "quack."

The laborers were paid by the number of boxes of chip. They worked three days a week -- Tuesday through Thursday, not the whole week.

There were a lot of snakes, bears, and deer. Twenty-seven were once killed in one season by one man.

The other stills were pretty far away. She knew of only three anywhere close.

Allen originally owned the still in partnership with another man whose name she has forgotten. Then Allen bought him out. When she and Allen left, they leased it.

The woods rider, Mr. Richardson, was like a foreman. He checked on the workers. The old woods woman (wife of the woods rider) asked her when she got there what she was going to do without furniture. This lady would talk through her nose. (Mrs. Willis did a good imitation of this woman calling her 7 year old son back from the river.)

[Since she went to the site right after her wedding it was expected that she took wedding gifts with her. She apparently did not. Another family member, her daughter, indicated that she had said before that Mrs. Willis' parents gave her money to buy her china and silver when she got to Florida and

that her husband needed this to pay the workers, so it was some 15 years later before she ever got around to buying "wedding presents."]

This still was their investment, and they could not just leave, even when hard times arrived.

There was a great fear of fire, and they didn't reprimand the workers too hard since her husband often said, "One match could ruin me," meaning it could destroy all the trees they had, as well as the still itself.

Her husband had almost been killed by one of the Negroes before she arrived. Although there was no law enforcement personnel, her husband had no trouble keeping order on the place for the most part. The distiller (a worker) carried a pistol and had Indian blood, causing him to be mean.

She knew of no children born at the site during the 18 months that she lived there.

There were no schools around, but there were few children either, and the few children did not work on the trees.

They did use the Clay (Herty) Turpentine Cups which were hung on a nail on the tree. They had to collect the turpentine often, or it would run over.

There were fish in the river, and they could be caught. No one swam in the river. A boat came up from Appalachicola once a week. Her husband would often go and buy something extra from the boat for their food.

She once had a girl to help her wash dishes, and she felt the girl had stolen a spoon. The spoon was found with the worker that the girl lived with. She had her college annual stolen by another worker.

A turpentine Negro was one that turpentineing was all he knew. They were "different" from all other Negroes.

As far as she knew, there was no liquor made on the site.

In the woods they used mules and wagons to haul the barrels. Turpentine was hauled also by boat and barge.

The turpentine industry was a new one for her husband. He liked to work out-of-doors.

They raked in winter to prevent fire among the trees in spring.

She was a graduate of Columbia College, in South Carolina, where she went to school with her future husband's sisters, and that is how she and Allen met.

Her husband's father, Dr. Willis, came to Florida from South Carolina also when there was request for a doctor at a saw mill near Sneads, Florida, which is near Greenwood.

She had a washwoman for the laundry. There was no running water in the house. They had an outhouse. They only planted cabbage in her garden, and three heads filled a barrel.

(We were saddened to learn of Mrs. Willis' death in June, 1976. -- Ed.)

Appendix D

DIRECTIONS FOR INSTALLING CUP AND GUTTER SYSTEM*

CUTTING AND BENDING GUTTERS. Before beginning work in the woods, cut and bend enough gutters for two or three days' work. This is done usually at the cooper shop.

Fasten securely one of the handles of the tinner's snips to the end of a table or bench so that the jaws of the snips are flush with the top of the table. Then by the use of any convenient gauge cut the thirty-inch strips of galvanized iron into lengths of 6, 7, 8, 9, 10, 11, and 12 inches.

There should be no waste, as the 30-inch strip gives, for instance, three 7-inch and one 9-inch gutters, or three 8-inch and one 6-inch gutters, etc.

The gutter bender is fastened securely to the top of the table, and the gutters, already cut, are bent by inserting them in the slot and pulling the handle forward.

After bending, the gutters are stacked in appropriately numbered compartments from which they can be easily loaded on the wagon each morning, the wagon carrying a large box with seven compartments sufficiently large for a full day's supply of gutters.

WORK IN THE WOODS. Begin with a small squad, and increase this gradually as skill is acquired. Usually the men work in pairs, an ax-man and a gutter-man together. One man can drive nails behind two ax-men.

AX-WORK. Use a straight-edged broad-ax with a straight handle not more than thirty inches in length. The ax is set on the handle so that the edge is parallel with the length of the handle, and in hewing the beveled side lies next to the tree.

By vertical strokes of the ax a flat surface is hewn one-half the width of the face to be chipped later. With each stroke of the ax the chip is prized outward slightly. When sufficient width has been obtained, the chip is split off by a glancing blow of the ax.

After a step forward or backward, a second face is hewn, the two faces meeting in a clean and sharply defined angle.

The cuts for the gutters are then made. These cuts are made from below slightly upward, the edge of the ax being inclined toward the ground while the eye of the ax is slightly lower than the edge. These cuts are to be well-separated at the center, at least an inch apart. With a little practice the same workman can easily make the cuts for both the right and the left gutter.

The ax-man, usually by a single stroke of the ax, then removes the rough bark at the point where the cup is to lie.

GUTTER WORK. The gutter-man is provided with a gutter box containing a number of gutters of each length. He follows the ax-man as closely as possible in order to insert the gutters while the cuts are still well-opened from the fresh cut.

The lower gutter should always be inserted first, in order to avoid cutting the hands on the outer point of the upper gutter and to secure proper alignment of the gutters at the center of the face.

After selecting a gutter of suitable length, it is inserted in the lower cut, care being taken to open the cut well with the point or edge of the gutter in order that it may be tightly gripped by the wood. This lower gutter should extend completely across one-half of the face to a point at least two inches beyond the center, this two-inch spout being necessary for hanging the cup properly.

The upper gutter is then inserted, extending completely across the face, but reaching just to the center so that it empties into the bed of the trough of the lower gutter.

Keep the gutters well-separated at the center of the face.

CUP WORK. With the claw hatchet, any unevenness in the tree which would prevent the cup hanging straight is first removed. The nail is then driven into the tree about two-thirds of its length and at a steep incline, thus steadying the cup and preventing its removal by cattle. The point selected for driving the nail should be just outside and slightly below the inner point of the lower gutter. Cups thus hung will not waste gum when they are filled with water as the nail hole is well-removed from the point at which the gum drops onto the surface of the water.

If the nail is driven too high on the tree the cup will not be vertical and hence will not hold its full quantity of gum. Such cups frequently prize out the lower gutter when they fill with water or with gum,

After fitting the cup accurately it is removed and inverted at the base of the tree to prevent accident from freezing. It may be preferred to postpone the driving of the nails and distribution of the cups until just before chipping begins.

COUNTING. It is customary to talley the ax-men just as in box-cutting, such a talley giving the complete record of the number of cups in each drift and in the crop.

OPERATION OF THE CUP AND GUTTER SYSTEM

CHIPPING. Care should be taken that the first streak be given full width. By using a long, swinging stroke in chipping, it is easy to avoid dropping chips into the cups.

DIPPING. Before removing the cup for dipping, clean the gutters with dip knife. The cup is then removed, the gum dipped out, and the cup replaced on the nail.

REMOVAL. Before scraping, the cups and gutters should be taken down. The gutters are thoroughly cleaned and the cups dipped and placed inverted on the ground near the tree. The gutters and nails are then drawn with a gutter-puller, and dropped to the ground.

SCRAPING. With the equipment removed, scraping proceeds as is usual in scraping boxed timber.

Many operators have found it advantageous to nail two extension arms on the side of the scrape box. Across these arms a piece of cloth is tacked, its inner edge made closely fitting to the front of the scrape box, while its outer edge is made full, so that when it is thrown up against a tree the loose cloth fits snugly to the tree, no matter what the angle of the face is, much scrape being thereby prevented from falling to the ground.

RAISING GUTTERS. Just after scraping it is advisable to raise the gutters for the following season. At this time the ax makes a better incision, and the gutters have the entire winter to get firmly gripped by the wood.

The cuts for the gutters are made on the old face, just far enough below the streak to allow easy passage of the hack.

The same care must be taken in providing a spout on the lower gutter as in the first year work.

When the gutters are to be raised for fourth-year work, the cuts with the broad-ax are overhand cuts, the right-handed stroke making the cut for the left gutter, etc.

*Taken from Herty Cup Hand Book, Issued in 1905 by the Chattanooga Pottery Company, with sole manufacturer's office in Jacksonville, Florida. Located in the Charles Herty Papers, Emory University, Atlanta, Georgia.

Appendix E

GEORGIA TURPENTINE DISTILLERIES - 1901

[Source: Georgia Historical and Industrial (Atlanta: 1901), pp. 529-886.]

County	Number of Distilleries (or other comments)
Baker	5
Brooks	10
Bulloch	15
Clinch	Not given, but turpentine and rosin produced
Coffee	36 [the largest producer in Georgia]
Colquitt	20 - Employing 2,000 hands, shipping 20,000 casks of spirits of turpentine of 50 gal- lons each and 75,000 barrels of rosin.
Decatur	21
Echols	Not given, but some turpentine and rosin pro- duced
Emmanuel	5
Irwin	25
Johnson	2
Laurens	15
Lee	2
Liberty	12
Lowndes	15
McIntosh	Darien shipped 1,000 barrels of rosin in 1900.
Mitchell	20
Montgomery	12
Pierce	Has turpentine farms; produced 15,000 barrels of naval stores [in 1900?].
Pulaski	2
Tattnall	Turpentine shipped via Seaboard Air Line Rail- road to Darien and Savannah.
Telfair	10
Terrell	1
Thomas	12
Wayne	"many"
Wilcox	"some"
Worth	12

Appendix F

NAVAL STORES STATISTICS

* [From Statistical Bulletin No. 181, Naval Stores Statistics: 1900-1954, U. S. Department of Agriculture, Agriculture Marketing Service, Crop Reporting Board, Washington, D. C., June, 1956.]

** [From Naval Stores Review International Yearbook, 1948, p. 37.]

FIGURE 1.

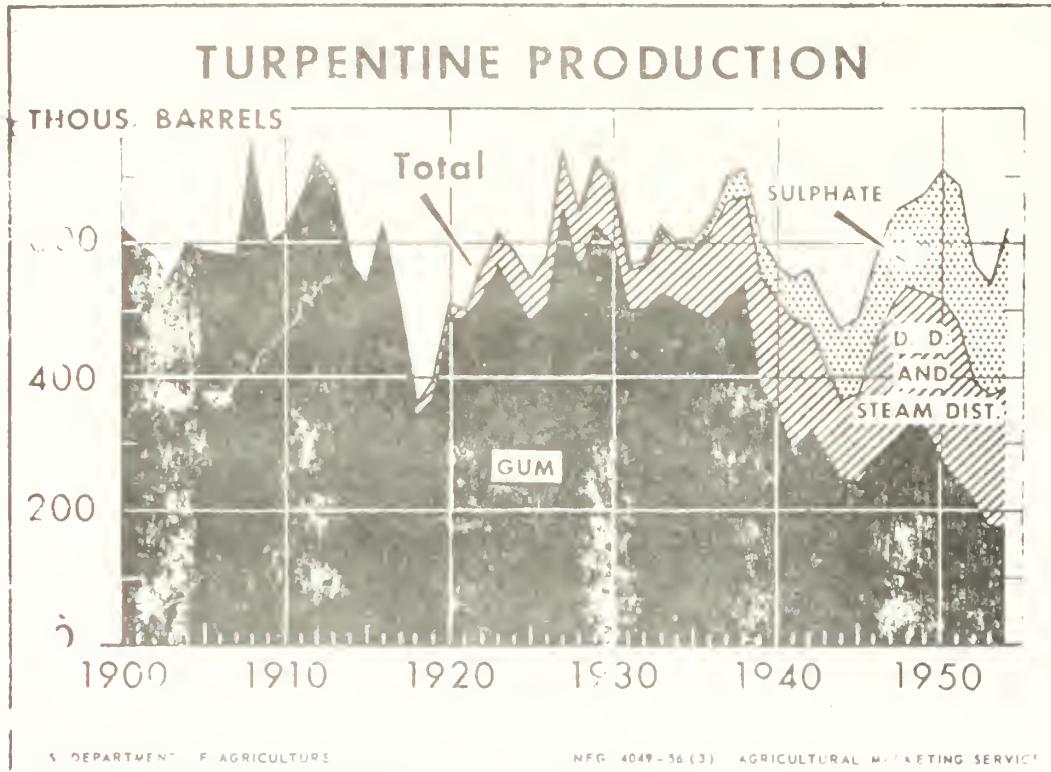
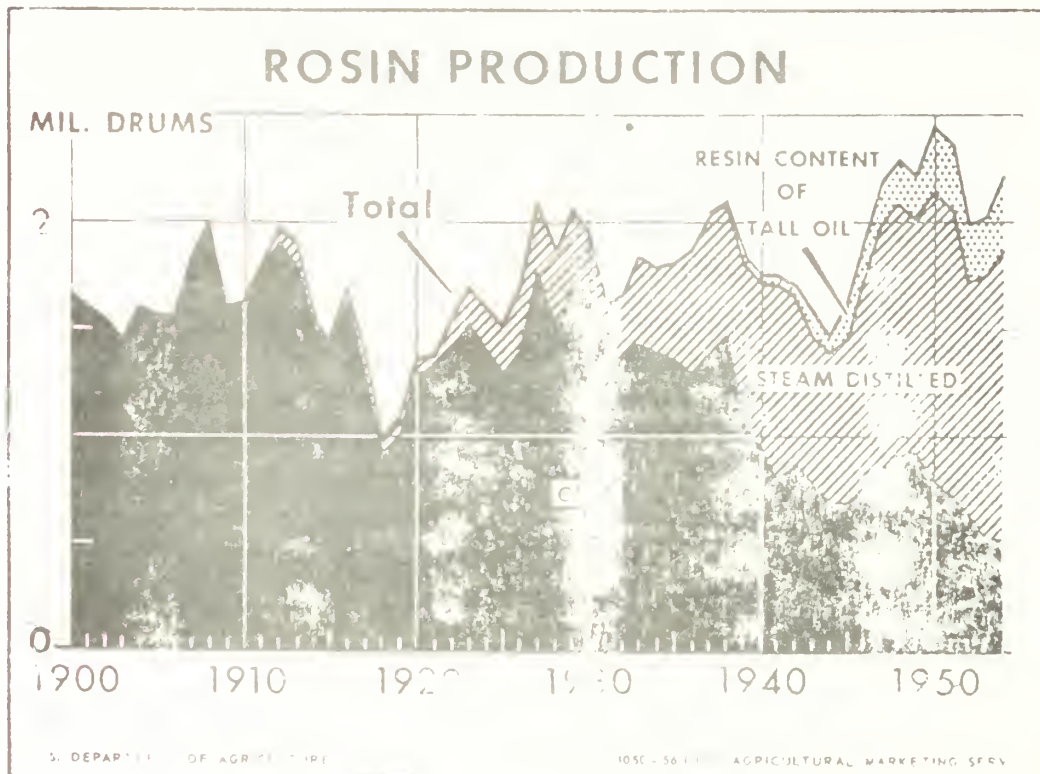


FIGURE 2.



* Table 12. -- Price and value of gum naval stores, annual, 1900-1954

Year beginning April	Season average price <u>1/</u>		Market value of gum naval stores			
	Bulk gum spirits of turpentine	Gum rosin <u>2/</u>	Per unit <u>3/</u>	Turpentine	Rosin	Turpentine and rosin
	Dollars per gallon	Dollars per 100 lb. net	Dollars	Thousand dollars	Thousand dollars	Thousand dollars
1900.....	.359	---	---	11,129	---	---
1901.....	.283	.61	22.69	8,490	5,075	13,565
1902.....	.414	.74	31.06	12,027	5,957	17,984
1903.....	.454	1.05	37.40	12,372	7,428	20,300
1904.....	.465	1.30	41.45	13,950	10,816	24,766
1905.....	.570	1.83	54.12	16,815	14,950	31,765
1906.....	.556	1.96	55.24	16,346	15,961	32,307
1907.....	.490	1.93	51.52	14,332	16,306	32,638
1908.....	.331	1.46	36.99	12,412	15,184	27,596
1909.....	.423	2.24	52.51	12,690	18,637	31,327
1910.....	.617	2.61	67.39	18,973	22,231	41,204
1911.....	.481	2.97	65.63	15,573	27,151	43,024
1912.....	.359	3.00	59.95	12,834	24,718	42,552
1913.....	.327	1.96	43.79	11,036	18,525	29,361
1914.....	.388	1.83	45.02	10,864	14,198	25,062
1915.....	.370	1.76	43.14	9,805	12,923	22,728
1916.....	.370	2.54	54.06	11,285	20,476	32,761
1917.....	.358	2.58	54.02	8,485	16,757	25,242
1918.....	.508	4.92	94.28	8,643	23,256	31,899
1919.....	1.212	7.49	165.46	22,240	38,792	61,032
1920.....	.393	6.07	154.63	34,059	40,623	74,682
1921.....	.566	1.83	53.92	13,759	12,590	26,349
1922.....	1.138	2.26	88.54	29,588	16,559	46,147
1923.....	.892	2.03	73.02	25,199	16,182	41,381
1924.....	.753	2.44	71.81	19,632	17,814	37,446
1925.....	.907	4.83	112.97	21,097	32,349	54,046
1926.....	.766	5.30	112.50	19,533	38,226	57,759
1927.....	.454	3.63	73.52	14,755	33,516	48,071
1928.....	.445	3.60	72.65	12,460	28,492	40,952
1929.....	.423	3.28	67.07	13,219	28,927	42,146

See footnotes at end of table.

Continued

* Table 12.--Price and value of gum naval stores, annual, 1900-1954--Continued

Year beginning April 1	Season average price <u>1/</u>		Market value of gum naval stores			
	Bulk gum spirits of turpentine	Gum rosin <u>2/</u>	Per unit <u>3/</u>	Turpentine	Rosin	Turpentine and rosin
	Dollars per gallon	Dollars per 100 lb. net	Dollars	Thousand dollars	Thousand dollars	Thousand dollars
1930.....	.333	2.18	47.17	9,970	18,376	28,346
1931.....	.341	1.69	40.71	8,525	11,925	20,450
1932.....	.328	1.23	33.62	8,216	8,716	16,932
1933.....	.367	1.69	42.01	9,652	12,571	22,223
1934.....	.396	1.98	47.52	10,098	14,283	24,381
1935.....	.376	1.97	46.38	9,344	13,942	23,286
1936.....	.315	2.79	54.81	7,604	18,662	26,266
1937.....	.254	3.20	57.50	6,584	23,102	29,686
1938.....	.166	2.18	38.82	4,435	16,622	21,057
1939.....	.193	2.37	42.83	3,694	12,992	16,686
1940.....	.247	1.98	39.72	4,127	9,667	13,794
1941.....	.527	2.42	60.23	7,511	9,963	17,474
1942.....	.591	3.22	74.63	9,513	14,545	24,058
1943.....	.679	3.97	89.53	9,791	16,176	25,967
1944.....	.779	5.61	117.49	9,550	20,193	29,743
1945.....	.791	6.50	130.55	9,660	23,473	33,133
1946.....	.967	7.43	152.37	13,068	29,075	42,143
1947.....	.627	7.83	140.97	9,218	33,718	42,936
1948.....	.428	7.39	124.86	6,941	35,401	42,342
1949.....	.384	6.47	109.5	6,202	31,117	37,319
1950.....	.551	6.31	115.80	7,490	26,172	33,662
1951.....	.763	8.73	160.37	9,402	32,332	41,734
1952.....	.534	7.53	132.12	5,804	24,851	30,655
1953.....	.516	7.72	133.88	4,584	21,218	25,802
1954.....	.519	7.91	136.69	4,566	21,580	26,146

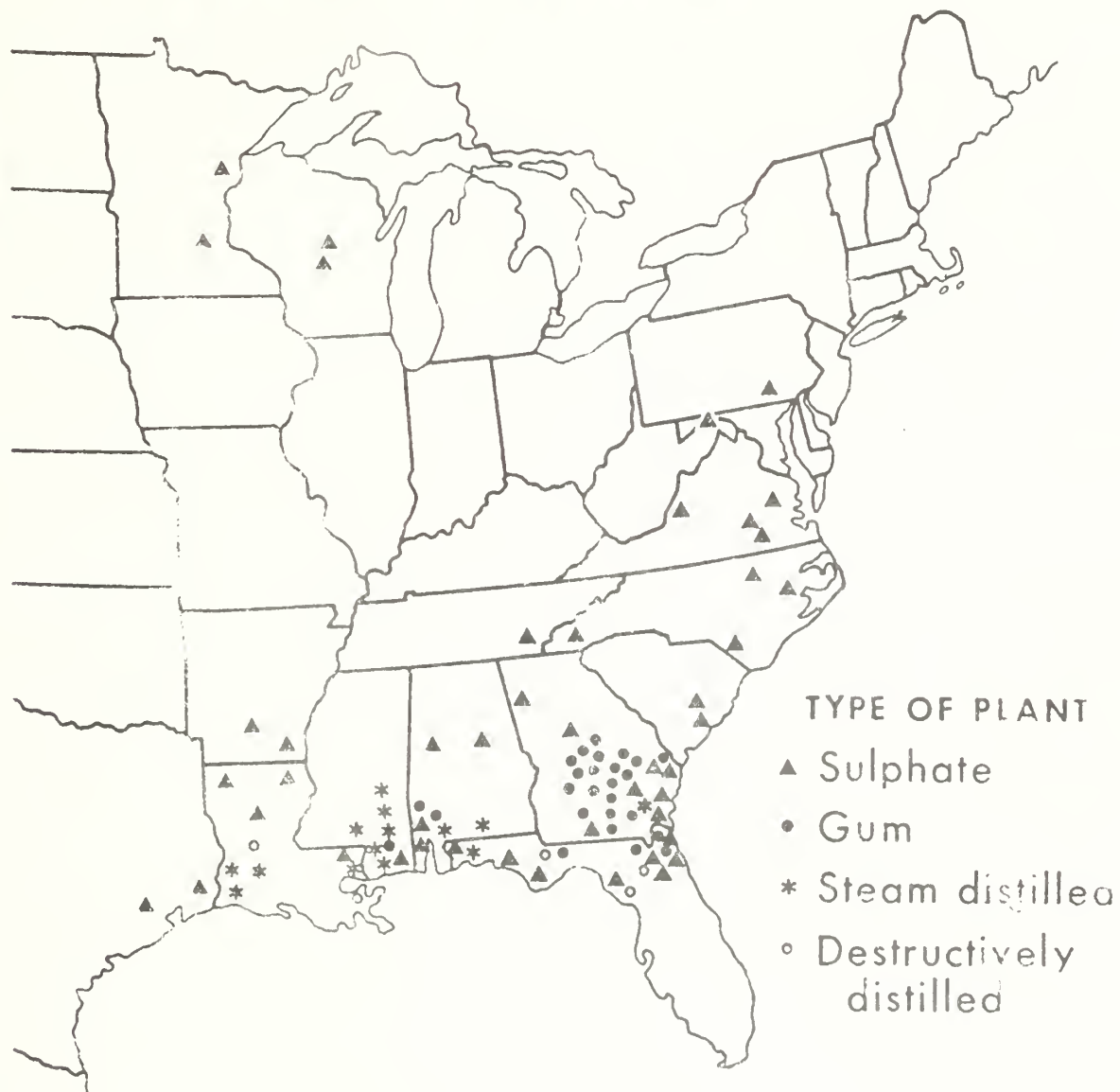
1/ Based on weighted Savannah Exchange price through 1950; thereafter on Market News Service. Six cents subtracted from turpentine prices as quoted in 1921-40 to eliminate cost of package.

2/ Basis K grade 1901-20; all grades thereafter.

3/ Unit consists of 50 gallons turpentine and 1400 pounds rosin.

FIGURE 8. *

LOCATION OF NAVAL STORES PRODUCTION PLANTS, 1954



Appendix G

FIFTY USES OF TURPENTINE IN 1930

Source: Warren P. Ward. History of Coffee County [Georgia] (Atlanta, 1930), pp. 314-315.

Information from U. S. Department of Agriculture Forest Service, Office of Forest Products.

Volatile thinner for paints, varnishes, and wood fillers.

To accelerate oxidation of drying oils (as ozonizer).

Solvent for waxes in shoes and leather polishes, floor polishes, and furniture polishes.

Solvent for gums in lacquers and varnishes.

Ingredients of waterproof cement for leather, rubber, glass, metals, etc.

Solvent for waterproofing compositions.

Cleaner for removing paints and oils from fabrics.

Pharmaceutical purposes, including disinfectants, liniments, medicated soaps, internal remedies, ointments.

Raw material for producing synthetic camphor and indirectly, celluloid, explosives, fireworks, and machines.

Raw material for producing terpeneol and eucalyptol.

Raw material for producing terpin-hydrate used in medicines.

Raw material for producing isoprene used in making synthetic rubber,

In the manufacture of sealing wax.

In glazing putty.

Ingredients of some printing inks.

In color printing, processes in lithography.

Lubricant in grinding and drilling glass.

As a moth repeller and in moth exterminators.

Constituent of insectides.

For cleaning fire-arms (alone or in combination with other materials).

In laundry glosses.

In washing preparations.

In rubber substitutes.

In wood stains.

In stove polishes.

In molding wax and grafting waxes.

In belting greases.

In drawing crayons.

In the manufacture of leather.

As a substitute for pine oil.

In flotation concentration of ores.

Solvent for rubber, caoutchouc, and similar substances.

Used to prevent "bleeding" in the manufacture of cotton and print goods.

Laboratory reagent, as substitute for more expensive organic solvent.

Oxygen carrier in refining in petroleum illuminating oils.

Colored turpentine, reagent for wood and cork in biological technique.

Appendix H

CORRESPONDENCE



Joe B. Tanner
COMMISSIONER

Department of Natural Resources

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Charles M. Parrish, III
DIVISION DIRECTOR

October 9, 1974

Dr. Wilbur Zelinsky
Department of Geography
Penn State University
Union Park, Pennsylvania 16802

Dear Dr. Zelinsky:

I am presently researching the McCranie Turpentine Still near Willacoochee, Georgia for this department. This site has been proposed as a gift from the McCranie Family for eventual use as a State Historical Site. This fall I will be researching not only this specific site, but also the Turpentine Industry in general.

You were mentioned as a good source on this subject by John Burrison of Georgia State University. He was able to show me "Figure 41" from your dissertation "The Settlement Patterns of Georgia" which showed "Turpentine Villages 1940".

I am interested in what sources you could direct me to, either here in Georgia, or elsewhere, persons who might really be into this subject, or anything that you feel I should know. I have previously researched Ante-Bellum and Revolutionary Sites and am not too well acquainted with Turpentine and the Naval Stores Industry.

I would also like to know if copies of your dissertation are to be found in any repository in Georgia so that I might obtain pertinent passages. Was a copy given to the Department of Archives and History?

I look forward to hearing from you soon on this subject.

Sincerely,

Kenneth H. Thomas, Jr.

Historic Preservation Section
Office of Planning and Research
Room 703-C-10

THE PENNSYLVANIA STATE UNIVERSITY

403 DEIKE BUILDING
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November 1, 1974

Kenneth H. Thomas, Jr.
Historic Preservation Section
Office of Planning and Research
Department of Natural Resources
270 Washington St., S.W.
Atlanta, Ga. 30334

RECEIVED

NOV 4 1974

HISTORIC PRESERVATION

Dear Mr. Thomas:

I am embarrassed to discover how little information I can offer in responding to your interesting queries of October 9. After 22 years, I am totally unable to recall the documentary sources for the map showing "Turpentine Villages 1940" in my doctoral dissertation. You will note from the brief passage on the topic, a copy of which is attached, that my comments are undocumented. Why this lapse from my usual practice I cannot explain. If you still wish to consult the dissertation (the remainder of which is not directly relevant to your research topic), I believe a microfilm^{copy} can be ordered from the University of California Library at Berkeley. A copy was not deposited with the Georgia Department of Archives and History when it was completed in early 1953.

Although I cannot cite any literature or specialists directly concerned with the turpentine and the naval stores industry, I can make a few suggestions as to how to go about looking for such. If there is any literature on the subject that is even remotely geographic, the chances are good that it will be cited in THE RESEARCH CATALOG OF THE AMERICAN GEOGRAPHICAL SOCIETY and its monthly supplements CURRENT GEOGRAPHICAL PUBLICATIONS, both of which may be in one of the larger Atlanta libraries.* Of the several individuals who might provide you with leads, perhaps the most promising are: Gary S. Dunbar, Dept. of Geography, University of California, Los Angeles; Milton B. Newton, Jr., Dept. of Geography & Anthropology, Louisiana State University, Baton Rouge; Roy Merrens, Dept. of Geography, York University, Downsview, Ontario; Charles F. Kovacik, Dept. of Geography, University of South Carolina, Columbia; and Henry Glassie, Folklore Institute, Indiana University, Bloomington, Ind.

Good luck!

Sincerely yours,

Wilbur Zelinsky
Wilbur Zelinsky

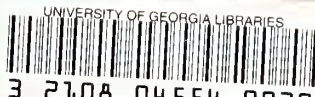
* On the off-chance that there may be a master's thesis or doctoral dissertation on the subject, you might try checking the annual or semi-annual listings of these in THE PROFESSIONAL GEOGRAPHER.

7/5
Excerpt from dissertation by Wilbur Zelinsky, The Settlement Patterns of Georgia, 1953, University of California at Berkeley, pp. 354, 355.

Turpentine Villages

"Georgia can boast the world's largest collection of one highly specialized type of company town -- the turpentine village. Some turpentine stills are situated in the market towns of the Coastal Plain; more frequently they are found in rural locations and draw their labor supply from a broad area. The thinness of population in many tracts of Piney Woods country occasionally make it advisable for the proprietors to establish small villages for their employees. These completely Negro settlements consist only of the still, one or two stores, and the low-quality cabins -- usually S-houses -- of the workers, altogether one of the least attractive varieties of agglomerated settlement in the state."

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